INDIAN AGRICULTURAL RESEARCH INSTITUTE

LIBRARY
New Delhi

Call No.

Acc. No.

With Compliments.

JANUARY 1933

The
Commercial Bulletin

A Monthly Review of Official and other
announcements relating particularly
to British Export Trade

Issued by
HIS MAJESTY'S SENIOR TRADE COMMISSIONER
IN INDIA AND CEYLON.

FAIRLIE HOUSE,
FAIRLIE PLACE,
CALCUTTA.

CONTENTS.

PAG

General 1

Industrial Change (by a Special Correspondent) . . 1

Finance . . . . [illegible]

Contracts Secured 8

The British Foundry Industry (by J. G. Pearce, M.Sc., Director, British Cast Iron Research Association) . 9

Iron and Steel 12

M[illegible]ools 14

P[illegible]nd Glassware 15

Textiles 17

Automobiles and Allied Trades 21

Catalogue Library 22

Trade Enquiry 24

GENERAL.

The increase in the value of exports from the United Kingdom, shown in the trade returns for October and reported in last month's issue, continued throughout November and the figures now pr
imports and exports standing at a l
any month since last April.

310253
IARI

The export figure of £35,153,5
respect of United Kingdom goods
espect of imported merchandise) for the first time in the last seven months approximates the total volume of trade to the figure of a year ago. The increase of £1,020,878 on the October figures in United Kingdom goods was mainly due to an improvement in exports of cotton yarns and manufactures, iron and steel and vehicles.

In November imports increased by £738,670 to £61,566,734; a decline on November, 1931, of £21,673,175.

Perhaps the most reliable indication of the slow, though consistent recovery in United Kingdom trade during recent months is to be found in the increased purchase of raw materials. Imports under that section during November showed an advance of £1,708,711 over the previous month; the principal increases being in raw cotton, raw wool, paper-making materials and rubber.

The figures taken as a whole are not unsatisfactory. In the few instances where the United Kingdom's imports in 1932 were augmented the goods imported for the most part were essential to the furtherance of home industry. Exports of manufactured goods have necessarily shared the shrinkage which has been general throughout the world, but it is gratifying to find that the heavy industries are making up more leeway; iron and seel and machinery showing further significant improvement during the past month.

INDUSTRIAL CHANGE.

(*By a Special Correspondent.*)

Such has been the severity of the world-wide trade depression that too much is taken for granted with regard to the evils that have accompanied it. Thus in the United Kingdom impressive statistics relating to unemployment tend to create the impression that a deadly blow has been struck at the country's commerce and industry.

Actually the situation is nothing like so black as it has frequently been painted, and a close perusal of all the official information on the subject shows that there are quite a number of bright patches on the industrial field. It also shows that the whole situation in commerce and industry has undergone such a change during the past few years that it would scarcely be an exaggeration to call it revolutionary. The Ministry of Labour recently published an analysis of the changes in the composition of the insured population since 1923, which gives striking evidence of this. Thus it is surprising to find that, in spite of the trade depression, between July, 1931, and July, 1932, more than half of the fifty-five industrial groups into which the 12 million insured workers are divided have increased their personnel.

While the insured population as a whole has increased by 14·8 per cent. in the nine years under review, the numbers in building and contracting, transport and distribution, and miscellaneous services—which together now include nearly 37 per cent., of all insured workers—have increased by over 40 per cent., while the numbers in manufacturing industries have increased by 5·3 per cent., and the number in mining and quarrying have decreased by 12 per cent. The striking increase in the building group is largely due to the abnormal increase in the contracting section on public works, and trades ancillary to building have naturally profited by the improvement.

The advance in the electrical trades is illustrated by the doubling since 1923 of the numbers in wiring and contracting, and the 60 per cent. increase in the numbers of those engaged in the manufacture of cables, lamps, etc., and in electrical engineering. In the motor-vehicle, cycle, and aircraft group the expansion during the last three years has not been so rapid as it was during the preceding six, but there are 33 per cent. more workpeople engaged in it than there were in 1923. In the tramway and omnibus group there is an increase of 71·2 per cent., while other road transport services show an expansion hardly less marked, and the distributive trades generally continue to increase steadily. On the other hand, the railway service shows a substantial decline.

Taken as a whole the industries which have expanded since 1923 now include more than twice as many insured workpeople as the contracted industries, which latter include coal and cotton. The change in the industrial composition of the country is shown by the fact that, whereas in 1923 out of every thousand workers 119 were in mining, there are now only 91: the number in textiles has fallen from 114 to 99; and in the metal trades from 192 to 164. On the other hand, the distributive workers have increased from 109 to 152, and building trade workers from 81 to 99. Another point to be noted is that the drift from north to south continues.

During the whole of this period industries have been reorganising and rationalising, so that in some cases a decrease in the number of workpeople has not meant a decrease in production. Productive capacity has indeed enormously increased. It is also interesting to remark that industries catering for luxuries for the masses of the people have expanded considerably. In short, while admitting that grave social problems still remain to be solved, and that unemployment is a national disease, the condition of the United Kingdom is nothing like so serious as many people would like to believe.

THE RAILWAY MOTOR ENGINE.

The development of the internal combustion engine led to an enormous increase in road transport, and this in turn reacted unfavourably on the railways. At the present time British railways are suffering severely from both the prevailing trade depression and road competition. Now another turn of events promises a new era in which motors will come to the rescue of the railways in their financial embarrassment. It is stated that a giant Diesel-electric motor engine is being built to haul a train on the London-Scottish route, and that it will be in service in the New Year. Further, plans are being completed for the building of an even more powerful motor-electric engine for hauling express trains over the same route.

The new source of power consists of an oil-burning internal combustion engine which makes the electricity for powerful motors. The facts so far ascertained about the new methods are of an astonishing character, and developments of the highest importance in connection with motor trains are pending. After 25,000 miles of experimental running the costs are said to be amazingly low. Oil fuel consumption is 5·13 miles a gallon: the cost of the fuel is only £3 7s. a ton: the cost of the fuel per mile is ·59 of a penny; the cost of lubricating oil is only ·11 of a penny a mile. This contrasts with from four pence to six pence a mile, according to the type of load, for coal costs for a steam locomotive. It is estimated that hauling a train with 150 passengers, the new type of engine could be run at a cost of about one-third of that for the train drawn by a steam engine.

TRACTOR DEMONSTRATION.

A tractor demonstration has recently given at Purley, Surrey, by Messrs. Marshalls, Sons, and Co., Ltd., of Gainsborough.

The tractor is 15/30 h.p. diesel-engined wheeled type. The engine has a single horizontal cylinder, 8-inch bore and 10½-inch stroke and is cold starting. The speed is about 550 r.p.m. The tractor has 3 speeds forward and 1 reverse. It travels at 2 m.p.h. on low gear, 3 m.p.h. on second gear, 4 m.p.h. on third gear and 2·5 m.p.h. in reverse. The draw bar pull is 4,000 lbs. when ploughing in low gear. The weight of the tractor is 2 tons 14 cwt. The fuel costs are about 4½d. per hour and the ground ploughed in one hour was approximately one acre.

During the trials the tractor was pulling a 3-furrow plough and the depth ploughed was 9 inches. The ground sloped upwards and the maximum grade was about 1 in 4. The soil was dry for the time of the year and was not heavy. The tractor started easily and worked up and down the hill without a check of any description. It was particularly noticed that the soil under the driving wheels was loosened rather than packed. The demonstration was a very impressive performance and clearly demonstrated what can be done by a well made diesel tractor of United Kingdom design.

The tractor demonstrated can be used for mole draining, hauling cultivators, rolls, harrows, harvesters and road work in addition to ploughing. It can drive all sizes of thrashing machinery up to 4 feet 6 inches with elevator and chaff cutter or trusser. The machine has a steady drive and the governor ensures even running under all load fluctuations.

A. V. ROE & CO., LTD.

The above firm, who are aeroplane manufacturers of Manchester and Southampton, have decided to transfer all the company's production works at Hamble Aerodrome, Southampton, to the main works at Newton Heath, Manchester. It is desired to concentrate all the activities of the firm at one centre.

NATIONAL CANNING.

It is announced that fish canning on a national scale by means of a chain of factories around the coast has been decided on by the National Canning Company. The first of these factories, at Dundee, is now being equipped.

FINANCE.

NEW COMPANIES.

Charles Brand & Son Ltd.

Private company. Capital £100,000 in £1 shares. Formed to carry on the business of public works contractors, etc. Directors: H. F. Brand and C. I. Brand. Registered Office—2, Wood Street, Westminister.

Somic Ltd.

Private company. Capital £85,000 in £1 shares. Formed for the purpose of acquiring the business of paper twine manufacturers carried on by Somic (in liquidation), Preston, Lancs. Directors: T. Blackburn and R. M. Fulton. Registered Office—9, Winckley Square, Preston.

English Clays, Lovering, Pochin & Co., Ltd.

Formed with a capital of £325,000 in £1 shares, to acquire the business carried on by English China Clays, Lovering China Clays and D. H. Pochin & Co.

Waring and Gillow (1932) Ltd.

The New Waring and Gillow Company, under the title Waring and Gillow (1932) Ltd., was registered as a public company on 8th December. The nominal capital is £920,000 in £1 shares. The company has been formed for the purpose of acquiring the undertaking of Waring and Gillow (incorporated in 1912) and with a view to the adoption of an agreement with Mr. I. C. Sanderson.

The first directors are: Messrs. I. C. Sanderson (director of Wall Paper Manufacturers), chairman, J. H. Brackenridge (director of Pioneer Stores), A. D. Campbell, merchant (director of G. & R. Dewhurst), W. J. Jennings (director of George Beer and Rigden and St. Laurence Laundry Company). The issued and paid share capital of the old company was £1,255,000.

McMichael Radio Ltd.

Registered as a public company, with a nominal capital of £250,000, to take over the radio business of L. McMichael, Ltd. It is to enter into agreements with the company, Gubbins & Co., H. L. McMichael, R. H. Klein and B. Hesketh.

£1,000,000 *Strawboard Company.*

A proposal, which has as its object the formation of a company with a capital of £1,000,000 to erect three factories in Berkshire for the manufacture of strawboards (a kind of cardboard), has recently been announced.

It is claimed that the factories will be the first of their kind in the United Kingdom. They are to be equipped with machinery to enable strawboards to be manufactured at a price which is said to be considerably less than that at which such boards are being produced in Dutch works.

British Alibel Canning Ltd.

Registered as a public company, with a capital of £100,000 in 5s. shares, to carry on the business of canners and preservers of fruit, vegetables, etc. Registered office—68, Basinghall Street, E.C. 2.

AMALGAMATIONS.

A Dunlop Development.

By the formation of the Dunlop-Revere Thread Company the Dunlop Rubber Company and the United States Rubber Company of America are fusing their interests in the rubber and latex thread businesses throughout Europe. The new organization will continue the manufacture and sale of the standard products of the two companies and will also develop certain new lines. Hitherto all rubber thread has been square thread, but the Dunlop Rubber Company and the United States Rubber Company have been working independently at the production of a round elastic thread directly from the "latex" of the rubber tree. This product will be manufactured in the United Kingdom.

The United States Rubber Company has also developed processes for the production of elastic yarns embodying the use of cotton, silk and other textile fibres. The new yarns can be knitted or woven into fabrics of all types. The new company will not engage in the manufacture of fabrics or completed articles.

J. Rodgers & Sons.

An agreement has been made by which Joseph Rodgers and Sons, the oldest cutlery firm in Sheffield, will purchase certain assets of John Round and Son, manufacturing silversmiths, of Sheffield. The agreement is subject to confirmation by the shareholders of the two companies and to the approval of the Court to a scheme of arrangement affecting the capital of Joseph Rodgers and Sons. The produce of John Round and Son (spoons, forks, etc.) will be manufactured at the works of Joseph Rodgers and Sons.

Road Rollers.

It has recently been announced that the businesses of Barford and Perkins and Aveling and Porter of Rochester, Kent, have been purchased from the receiver in charge of Agricultural and General Engineers, Ltd., which owned the share capital of both companies, by Mr. Edward Barford in conjunction with the Ruston and Hornsby group of companies and Messrs. Lister and Co. of Dursley, Glos.

It is understood that a new company will be formed to develop the good will and trade connections of the existing companies.

Increases in Capital.

	£
Godfrey Phillips, Ltd.	550,000
Bowater's Mersey Paper Mills, Ltd.	600,000
The British Electric Transformer Co., Ltd.	434,375
Iraq Petroleum Co., Ltd	700,000

CONTRACTS SECURED.

Orders from Egypt.

The Egyptian State Railways and Ministry of the Interior have placed contracts in the United Kingdom to the value of £20,000 as follows:—

Messrs. The Rivet Bolt and Nut Co., Glasgow, bolts and nuts.

Messrs. David Colville & Sons, Ltd., Glasgow, steel rails.

Messrs. Gourock Ropework Co., Ltd., Glasgow, tarred manila rope.

Messrs. British Thomson Houston Co., Ltd., Rugby, bridge electrical network extension.

Messrs. British Mannesmann Tube Co., Ltd., London, steel poles.

Messrs. Callenders' Cable and Construction Co., Ltd., armoured cable.

Messrs. Nasmyth, Wilson & Co., Ltd., Manchester, locomotives.

Aircraft Contracts.

The Government of Iraq has placed an order for six twin-engined military aeroplanes with the De Havilland Aircraft Co. The type ordered is new, and is a biplane fitted with two "Gipsy" Moth inverted engines of 130 h.p. It will have a speed of about 110 m.p.h. The machines will carry armament of machine-guns and bombs.

The Norwegian Government has arranged with the Hawker Engineering Company for the construction in Norway, under license, of single-seater fighter aircraft.

These machines will be similar to the " Fury " type used by the R.A.F., but fitted with 535 h.p. Armstrong-Siddeley radial engines.

Big Steel Order.

A contract amounting to over £20,000 has just been secured by Messrs. Kryn and Lahy (1928), Ltd., the steel founders and engineers, of Letchworth, Herts, for the supply of high-class steel castings and precision machine work to the Sullivan Machinery Co., an American manufacturing concern specialising in mining machinery.

G.W.R. Order for 100,000 *Steel Sleepers.*

An order for 100,000 steel sleepers of United Kingdom manufacture has just been placed by the Great Western Railway. These will be used during its 1933 relaying programme, by the end of which the company will have laid in its main, relief and branch lines some 400,000 steel sleepers, equal to 185 miles of track. This new order represents some 10,500 tons of steel, in addition to which a further 46,500 tons of steel rails, fish-plates, bolts and girders for bridges and structural work will be required, making a total of 57,000 tons for the 1933 programme.

Big Tinplate Order.

An order for 1,000,000 boxes of tinplates has been received by Richard Thomas & Co., Ltd., from an American company operating in Canada.

British Rails for Finland.

The Finland State Railways have placed an order for the greater part of their 1933 requirements of rails and sole-plates with two United Kingdom firms of steel manufacturers, the United Steel Companies, Limited, and Dorman Long and Co., Ltd. The total tonnage involved is slightly in excess of 10,000 tons, with a total value of approximately £85,000 sterling.

THE BRITISH FOUNDING INDUSTRY.

(By J. G. Pearce, M.Sc., Director, British Cast Iron Research Association.)

The founding industry broadly comprises the field between the production of metal in the cast state from the time it is refined from the ore (chiefly, in the case of ferrous metals, through the blast furnace) and the stage at which it becomes, by further refinement, capable of being wrought, *i.e.*, rolled, extruded, drawn, etc. It includes the production of foundry pig and refined pig iron, the manufacture of ferrous castings in white iron, grey iron and steel, and the production of non-ferrous castings in any of the non-ferrous metals and alloys. The British Cast Iron Research Association is concerned with the production of ferrous castings and was founded in 1921. Up till that time research work, for the purpose of elucidating the properties of the cast metals, had been badly neglected compared with that which had been devoted to the investigation of the more refined wrought metals, especially steels, and it was in part to repair the deficiency that the Association was founded. All industrial countries had more or less neglected the cast metals because the metals concerned are extremely complex and the industry itself, being the oldest branch of the engineering industry, is very conservative. Cast metals, however, are much more important to civilisation than the intrinsic value of the products concerned would suggest, because with small exceptions, all metals at some time or other pass through the cast state in the progressive stages of their treatment, and in many cases they retain properties which are acquired in that state. A considerable tonnage is made for subsequent use in the cast state.

The process of founding is so widely spread that the industry is not clearly defined statistically or industrially. Foundries are attached to all branches of the engineering trades; some of them run in connection with engineering works; others are attached to foundries supplying to the trade; other foundries are attached to blast furnace, iron and steel works, etc., and the manufacture of castings is one of the first developments to take place in the industrialisation of a newly developing country. For this reason the British Cast Iron Research Association operates on an Empire basis and welcomes the membership of all works and foundries, whether makers or users of cast iron in any form. It has members in India, Australia and Canada. The total annual value of the product of the industry in normal times in Great Britain has been estimated at 40 millions sterling, the tonnage output being roughly 2 millions. For the first time the 1930 Census of Production, published in 1932, statistically differentiated iron and steel founding from the engineering industry, but the manner of the collection of the information was such that only a proportion of those works having foundries were included, between 700 and 800 as against some 2,000 known to exist. The smaller total, however, includes the most important producers, because the value of the products recorded as finished castings, but without finishing costs, is about 27 millions sterling. There is thus a much smaller discrepancy between this figure and the author's estimate than between the corresponding numbers of establishments concerned.

The founding industry thus comprises the production of foundry pig and refined iron, the production of chilled or white iron castings, grey iron castings in all forms and malleable iron castings. In the latter process castings are rendered ductile by an annealing process subsequent to casting.

The British Cast Iron Research Association has the most comprehensive collection of published information in the world on founding and this is available at any time on demand. Impartial information is furnished on proprietary materials and patented processes offered to the trade. The Association maintains an extensive research programme designed to facilitate the improvement in quality and to reduce manufacturing cost of foundry products. This programme covers three main fields: melting equipment—particularly the cupola furnace, moulding sands, and metallurgy of cast and malleable iron. The Association also offers members a technical service of advice on any foundry problem of whatever nature. These problems cover a very wide range and refer to the raw materials of the industry, melting practice, moulding practice, casting design, sands and refractories, defective castings, and so on. Any tests or examinations incidental to the solution of these problems are made without charge.

Among the more spectacular achievements of the Association has been the balanced blast cupola. The original cupola design introduced by the Association and which became known as the soft blast type, was used up to 1930, but the new type is now achieving striking success. Its special features are a very high melting temperature and a striking economy in coke. The large majority of the installations now in existence, which vary from cupolas of 21 inch bore yielding $1\frac{3}{4}$ tons an hour to cupolas of 54 inch bore yielding 12 tons an hour, are working on coke ratios of 14 or 16 parts of metal to 1 of coke in the charge. Another achievement is the production of new and scientifically revolutionary types of heat-resisting iron known as Sisal and Nicrosilal, the former being recommended for such castings as stoker links, fire bars, melting pots, furnace castings, etc., and the latter for castings where the cost or inconvenience of replacement is high, and where ductility is an advantage. Where these irons have replaced existing cast irons the service life has been extended many times and in certain applications it has been possible to use cast iron for the first time.

Elaborate studies have been made of moulding sands and methods of testing devised and it is estimated that by the systematic application throughout the industry of the knowledge derived from the investigation of moulding sands, core sands and refractories, a large sum would be saved.

The art of founding as a modern industrial enterprise originated in Great Britain and British founders have always been considered to be in the front rank in one of the very few real arts remaining in the engineering industry. The formation of the British Cast Iron Research Association which maintains close touch with foundry developments abroad, particularly in the United States, Germany, France and Belgium, is a guarantee to overseas buyers and users that the industry is uniting with practical skill the latest metallurgical knowledge.

IRON AND STEEL.

The statistics prepared by the National Federation of Iron and Steel Manufacturers for the month of November show that there were 59 blast furnaces working at the end of November, which is the same number as at the beginning of the month. The production of pig iron in November amounted to 267,700 tons compared with 275,000 tons in October. There was a slight increase in the daily rate as compared with October. The output of steel ingots and castings amounted to 473,200 tons compared with 439,800 tons in October.

The total importation into the United Kingdom of iron and steel manufactures during November is given in the official trade returns as 57,892 tons. This figure is only slightly more than one-third of the importation in October. The principal commodities which have contributed to this noteworthy decrease are semi-finished materials, blooms, billets, sheet and tinplate bars. The average importation of blooms and billets has normally been round about 50.000 tons per month, but in November 9.182 tons only were imported. Similarly, in the case of sheet bars, in recent years 50,000 tons has been an average figure, whereas in the month under review only 1,679 tons of sheet bars were imported. This semi-finished material is now being supplied by United Kingdom rolling mills, in fact, the position of the Welsh sheet bar rolling industry is improving rapidly.

As regards the export trade in iron and steel, the November figure is 170,261 tons as compared with 160,430 tons in October. In the main the chief commodities have maintained the volume of exports recorded during recent months. Heavy plates, however, have reached a higher level in 19,239 tons as compared with 6,942 tons in October: but, on the other hand, galvanised sheets have receded from 24,492 tons to 18,597 tons. The exportation of tinplates at 40,109 tons maintains the high average of recent months. The Canadian figure for tinplates, namely, 7,255 tons, is very encouraging. Cast iron pipes at 5,000 tons remain at the improved export level indicated during recent months, but there is no doubt that Japanese competition is very keenly felt in this industry, particularly in Middle East and Eastern markets. On the other hand, the steel tube business seems to be slowly expanding. Railway material still shows no signs of a return to trade of normal dimensions.

GREAT ENGLISH STEEL WORKS.

A great new English steel works is to be erected at Corby, Northamptonshire, at a cost of £3,300,000. The work, which will take two years to complete, and will provide employment, direct and indirect, for thousands of men, is to start immediately.

This development, which is regarded as of national importance, is due to the enterprise of Stewarts and Lloyds, Ltd., which company controls 22 iron and steel and tube manufacturing works in Scotland and England

and produces the bulk of the steel tubes made in the United Kingdom. The outstanding feature of the project is the intention to restart in the United Kingdom the manufacture of basic Bessemer steel. The works, it is confidently expected, will not only lead to big economies in manufacturing costs, of benefit to the home market, but will give a fillip to United Kingdom exports of tubes.

LANCASHIRE STEEL INDUSTRY.

It has been announced that the Lancashire Steel Corporation has purchased the Whitecross Company of Warrington, manufacturers of all classes of wire products. The Lancashire Steel Corporation was formed to control the iron and steel interests of the Partington Iron and Steel Company, the Wigan Coal and Iron Company, Pearson and Knowles, Ltd., and Rylands Bros. and this was effected under the auspices of the Securities Management Trust, one of the companies formed by the Bank of England to assist in the reorganisation of industry. The latest acquisition has been made with a view to a further reorganisation and work has commenced upon a continuous wire rod mill with the latest practice. The undertaking will now begin with the raw materials of iron ore and coal and manufacture right through coke, pig iron, to steel ingots, wire rods, etc.

Barbed wire, wire nails and wire netting will be produced from United Kingdom materials.

The scheme is estimated to involve an expenditure of £1¾ millions.

MACHINE TOOLS.

Four-wheel Tungsten-carbide Tool Grinder.—The Lumsden Machine Co., Ltd., Gateshead-on-Tyne, have introduced a new four-wheel tool-grinding machine for grinding and reconditioning tungsten-carbide and other high-speed alloy tools, which require special treatment on account of their extreme hardness. The four wheels are each 10 inches diameter by 3 inches wide and comprise two roughing wheels, one finishing wheel, and one burnishing wheel.

One of the roughing wheels is intended for grinding away the stock of the tool shank, and is also suitable for grinding high-speed steel tools or general tool work. The wheels are recessed on each side so that any shape of tool can be ground without reversing the direction of rotation to enable the wheel to run towards the tool. Grinding is done on the face of the wheel so that a definite front clearance with maximum strength of cutting edge is ensured.

The spindles are mounted in dust-proof ball bearings, so arranged that neither end play nor radial movement of the spindle can develop, and are driven by an enclosed motor through the medium of a single belt, which is automatically tensioned by a ball-bearing jockey pulley. The motor also operates a water pump by which an adequate supply of cooling liquid is delivered to the grinding wheels. Tool rests are arranged on each side of the wheels and can be adjusted without the aid of spanners.

Ward, Haggas and Smith, Parson Street, Keighley, have in progress portable cylinder boring machines for motor-car cylinder work. Orders just completed include an 11½-inch centre relieving lathe for the Admiralty, and a portable grinding machine for mounting on the table of a rotary face-milling machine.

Craven Brothers (Manchester), Ltd., Reddish, Stockport, have recently booked a large order for railway axle plant for the Russian Government. The machines include motor-driven parting-off centring and journal shouldering machines; semi-automatic, heavy type double-axle roughing lathes; semi-automatic, double-axle finishing lathes; and semi-automatic, motor-driven axle journal burnishing lathes.

POTTERY AND GLASSWARE.

Recent reports from the " Potteries " indicate that the improved conditions referred to in previous issues of the " Commercial Bulletin " are being maintained, and a more hopeful feeling in regard to the future trend of trade is evident. There is still, however, little real movement towards increased business for export, and an improvement in this section of the trade is anxiously awaited.

Following are details of the total quantity and value of the exports of pottery of all classes (excluding bricks) for the first eleven months of 1932, with comparative figures for the two preceding years:—

	Quantity.	*Value.* £
Eleven months ended 30th November, 1932	2,347,208	2,721,535
Eleven months ended 30th November, 1931	3,616,703	3,217,127
Eleven months ended 30th November, 1930	4,214,940	4,811,310

The following statement gives details for each Section of the industry:—

Section.	*Value of Exports.*			*Decrease per cent. compared with 1931.*
	1932.	*1931.*	*Decrease.*	
	£	£	£	
Tiles (all classes) .	185,474	236,302	50,828	21·5
Sanitary ware .	516,895	731,666	214,771	29·3
Chinaware . .	215,403	231,634	16,231	7·0
Electrical porcelain.	88,658	83,770	4,888(Inc.)	5·8(Inc.)
General earthen-	1,372,055	1,472,023	99,968	6 8
Stoneware . .	29,554	41,723	12,169	29·1
Refractory goods and clay products not elsewhere specified.	313,496	420,009	106,513	25·4
Total .	2,721,535	3,247,127	459,592	15·4

The following figures indicate the value of exports to each of the principal markets for the period under review:—

Market.	*Value of Exports.*		*Inc. or Dec.*		*Inc. or Dec. % over 1931.*	
	1932.	*1931.*	*Inc.*	*Dec.*	*Inc.*	*Dec.*
	£	£	£	£		
France . .	27,150	42,252	—	15,102	—	35·7
United States .	238,218	338,418	—	100,200	—	29·6
Brazil	70,928	51,830	19,098	—	36·8	—
Argentina . .	119,177	192,331	—	73,154	—	38·0
Irish Free State . .	257,057	265,454	—	8,397	—	3·2
South Africa . . .	173,948	188,954	—	15,006	—	8·0
India	131,303	134,501	—	3,198	—	2·4
Australia . . .	217,015	141,152	75,863	—	53·7	—
New Zealand . .	116,481	162,732	—	46,251	—	28·4
Canada	569,420	667 315	—	97,895	—	14·7
Other Countries . .	800,838	1,032,188	—	231,350	—	22·4
Total	2,721 535	3,217,127	—	495,592	—	15·4

GLASS AND GLASSWARE.

There is no change of importance to record for this industry.

The value of exports for the first eleven months of 1932 and comparative figures for the two preceding years are given below:—

	£
11 months ended 30th November, 1932 .	1,166,735
11 months ended 30th November, 1931 .	1,260,715
11 months ended 30th November, 1930 .	1,734,038

The decrease, compared with 1931, has taken place principally in the plate and sheet glass section of the industry.

TEXTILES.

COTTON.

The uncertainty over the war debts question, and the increased estimate of the American cotton crop, which is 780.000 bales above the November estimate, have combined to keep prices on a downward trend in the raw cotton market. Enquiry has been fairly plentiful, but buyers have been waiting for prices to steady, before taking any action.

The same weakness has been noticeable in the Manchester market, although, thanks to the settlement of the wages dispute, the industry should be in a good position to take advantage of a trade revival.

There has been a demand for a wider range of materials from India, but no large orders have been booked. Madras, Bombay and Karachi have taken small lots, mainly in the lighter bleaching styles, prints and fancies. China has taken some white shirtings and Singapore and the Straits Settlements have taken bleached goods. But the trade has been very quiet. A steady demand for drills, bleaching cloths and high class dress goods continues from Australia and South Africa.

The exports of piece goods during November were distinctly better than in October; greys nearly doubled and bleached goods increased by nearly 14 per cent. Printed goods, and those dyed in the piece, though higher than for the corresponding month of 1931, show a slight decrease from the October figures, while coloured wovens show a rise.

The exports of unbleached yarns have again decreased, while bleached and dyed yarns continue to go up. The figures for November, 1932, compared with November, 1931, and with October, 1932, are as follows:—

	November 1932.	*October 1932.*	*November 1931.*
	1,000 lbs.	*1.000 lbs.*	*1,000 lbs.*
Cotton yarns, grey, unbleached.	**8,637**	**9,774**	**10,993**
Cotton yarns, bleached and dyed.	**1,302**	**1,128**	**8,158**
	1,000 sq. yds.	*1,000 sq. yds,*	*1,000 sq. yds.*
Cotton Piece Goods.			
Grey	**31,227**	**16,069**	**22,773**
Bleached	**54,522**	**47,391**	**39,641**
Printed	**29,888**	**31,171**	**28,233**
Piece dyed	**35,077**	**42,657**	**34,723**
Yarn dyed	**8,495**	**7,157**	**5,618**
Total Piece Goods	**159,210**	**138,447**	**125,990**

WOOL.

Raw wool, tops, and yarns.—Wool values at the concluding London wool auction in 1932 were approximately 5 per cent. lower than those ruling last October. Messrs. H. Dawson Sons & Co., Ltd., the well known wool-brokers, commenting on the position at the end of November, stated:—

> " . . . Demand has been good at the principal consuming centres, and consumption is still at the highest level known during the last decade. Combing mills in every centre appear to be running day and night. Most spinning mills are also working full hours, and mule spinners generally are working on a two- to three-shift basis. This latter feature is due to the demand for hand-knitting wools, chiefly in merino sorts. Unemployment has, happily, shown a substantial decline throughout Yorkshire. . . .
>
> " Naturally a cautious undertone remains after the experience of falling markets during the past five years, but, against this, the rapid absorption of all supplies in merinos and finest grades of crossbreds has to be recognised. Stocks of tops in Continental centres have substantially declined, and in Yorkshire the supplies from the combing mills are being cleared as quickly as they can be produced . . . A more hopeful outlook for crossbreds, owing to the revived demand for medium grades, is mainly due to the call for knitted goods.
>
> " Within the textile industry itself the general position is becoming much more assuring. The wool trade, as expected, has come out of the morass more quickly than some of the heavy trades. Meanwhile, more than a quarter of the merino supplies has been sold in the overseas markets, and the disposal of available quantities is well ahead of previous seasons. . ."

The amount of wool imported into the United Kingdom during January/November, 1932, and the amount retained (imports less re-exports) show big increases on the amounts for the corresponding periods of 1931.

	Jan./Nov. 1931. lbs.	*Jan./Nov. 1932.* lbs.
Total imported . .	760,125,700	822,235,300
Re-exported . . .	244,275,400	286,374,700
Amount retained . .	515,850,300	535,860,600

Analysing these figures it will be seen that over 31 million lbs. more was received from Australia, more than 9 million lbs. more from New Zealand and 64¼ million lbs. more from South Africa. The increase is in fine qualities, as would be expected by the present position in the trade.

	Jan./Nov. 1931. lbs.	*Jan./Nov. 1932. lbs.*
Total imported . .	760,125,700	822,235,300
of which from:—		
Australia . . .	232,404,900	263,707,400
New Zealand . . .	184,432,800	193,832,500
South Africa . . .	112,631,700	176,900,900
Argentina . . .	88,987,700	84,356,300

The exports of semi-manufactures improved considerably in 1932 compared with the corresponding eleven months of 1931. Germany in particular, more than doubled her imports from the United Kingdom of wool tops, while there was a large increase in the export of worsted yarns to China. The quantities of tops and yarns exported to the group of markets classed under "other countries" show large increases. The total figures are as follows:—

	Jan./Nov. 1931. Centals of 100 lbs.	*Jan./Nov. 1932. Centals.*
Wool tops	250,945	371,446
	lbs.	*lbs.*
Woollen yarns (carded) . .	4,740,800	5,429.900
Worsted yarns (combed) .	27,145,900	29,121,400
Alpaca, Mohair cashmere .	3,718,100	2,970,400

LINEN.

Flax prices are very firm, and it has become apparent that this firmness is not due solely to the position of sterling but arises also out of doubt as to the available quantity of foreign, notably of Russian, flax.

The Northern Ireland Minister of Agriculture reports that up to the present only limited quantities of Northern Irish flax have been scutched; the yield from these lots has been variable, but the quality of the fibre is fairly good. Of the nine centres from which the Ministry receives weekly reports only Ballymoney offered flax for sale during November. The supplies on offer were heavier than in October and the average price was 8*s.* per stone as compared with 7*s.* 4½*d.* in November, 1931.

The demand for yarn is slightly better than it was a month ago and spinners have been able to secure slightly better prices, abundantly justified by the increase in the price of raw material.

Weavers have had a somewhat better month, although too many of their sales have been small lots, some of them last-minute Christmas sales for the home market. The best lines remain handkerchiefs and small fancy goods. Prices are a little better.

Merchants report that business is still unduly slack both at home and in overseas markets. The official trade returns for November unfortunately show a shrinkage of trade in piece-goods in most of the overseas markets. The most notable exception is Brazil, which took 375,200 square yards of linen last month, as compared with 77,700 square yards in November, 1931. The Brazilian market has been remarkably good all this year; in the eleven months ended 30th November it has taken 1,711,100 square yards of British linen as compared with 840,300 square yards in the same period last year. Trade with Australia also remains good; it took 549,000 square yards in November as compared with 473.800 yards in November, 1931, and 425,700 square yards in November, 1930. The Canadian market has shown a strong recovery. In October, Canada only took 182,300 square yards as compared with 269,300 square yards in October, 1931; last month it took 448,300 square yards as compared with 232.800 square yards in November, 1931.

The United States market was dull during the period under review taking 3,173,400 square yards to the value of £122,689, as compared with 4,243,200 square yards to the value of £155,348 in November, 1931.

The value of the linen goods imported into the United Kingdom in November last was £47,138 as compared with £81,124 in November, 1931, and £73,211 in November, 1930.

The value of the exports of linen goods from the United Kingdom in November last was £491,172 as against £556,159 in November, 1931.

The total value of linen goods exported during the eleven months ended 30th November, 1930, 1931 and 1932, were respectively £6,981,003, £4,985,961 and £4.773,464, and the quantities of linen piece-goods exported during the same periods were 57,248,400 square yards, 59,821,900 square yards and 59,626,600 square yards.

AUTOMOBILE AND ALLIED TRADES.

A YEAR OF PROGRESS.

The United Kingdom Motor Industry may look upon 1932 as a year during which very real progress has been made. The year has seen a very real advance. At home the United Kingdom manufacturer has still further consolidated and extended his grip on the market, while overseas steady progress has been made.

IMPORTS AND EXPORTS.

The figures of Imports and Exports afford most satisfactory evidence of the manner in which the industry is progressing in its determination to secure a position of pre-eminence in the motor markets of the world.

Gross imports of motor vehicles into the United Kingdom are shown in the following table:—

	Total Vehicles No.	*Imported Value.* £
1931 (11 months to November) .	4,619	820,560
1932 (11 months to November) .	3,208	571,768
Decrease .	1,411	248,792

Gross exports, on the other hand, show the following position:—

		£
1931 (11 months to November) .	21,487	4,050,231
1932 (11 months to November) .	31,844	4,758,375

an increase of 13,357 vehicles, value £708,144.

The excess of vehicles Exported over those Imported show the progress made:—

		£
1931 (11 months to November) .	16,868	3,229,671
1932 (11 months to November) .	31,636	4,186,607

OVERSEAS.

Evidence of improving conditions in Australia is afforded by the registration returns for September of the four largest States of the Commonwealth, showing that the number of new cars sold in the States was approximately 30 per cent. greater than in the corresponding month of 1931. The proportion of United Kingdom cars sold nearly doubled, increasing from 20·7 per cent. in September, 1931, to 38·6 per cent. in September, 1932.

In New Zealand the September figures for the new car registration reveal that British cars are in a very favourable position in that market. British cars again head the registrations, holding first place for the nine months of 1932. Imports of United Kingdom cars and commercial vehicles into the Dominion during the first half of 1932 increased in comparison with the corresponding period of 1931, from 1,565, value £157,275, to 1,703, value £247,575.

Succeeding mails bring from various parts of the Empire reports of the growing popularity of British-made motor vehicles. In South Africa, India, Ceylon and in other parts of the Empire the United Kingdom vehicle is going ahead.

Not only in the Empire is this so, for of late there has been a distinct interest shown from the Continent in the possibilities of British vehicles. Indeed, at the recent British Exhibition at Copenhagen one of the most important sections, attracting numbers of interested and prospective purchasers, was the section devoted to the United Kingdom Motor Industry.

As conditions gradually improve there is room for little doubt that the industry will secure an even larger share of the export market, and the United Kingdom Motor Industry looks forward with confidence to being able to play an increasingly important part in the future in the development of Empire resources.

CATALOGUE LIBRARY.

The undermentioned catalogues relating to United Kingdom Manufacturers have recently been received and may be consulted by "*bonâ fide*" firms or individuals at the Office of His Majesty's Senior Trade Commissioner in India, Fairlie House, Fairlie Place, Calcutta.

Names and addresses.	*Description.*
* F. J. Edwards, Ltd., 406, Euston Road, London, N. W. 1.	Sheet Metal working machinery (new and reconditioned).
Stratton & Co., Ltd., Bromsgrove Street, Birmingham.	Wireless Apparatus and Accessories.

Names and addresses.	*Description.*
Sir W. A. Rose & Co., Ltd., 161, Cheapside, London, E. C. 2.	Paints, Colours, Enamel Varnishes and Cellulose Enamels
Tangyes Ltd., Cornwall Works, Birmingham.	Pumps and Pumping Plant Gas and Oil Engines Steam Engines and Garage Equipment.
Wallis & Steevens Ltd., Basingstoke.	Motor Road Roller.
* Thos. W. Ward Ltd., Albion Works, Sheffield.	Secondhand machinery.
Rowntree's, York . . .	Cocoa, Chocolates and Confectionery.
* B. S. A. Cycles Ltd., Small Heath, Birmingham.	Cycles and Motor Cycles.

* The catalogues marked with an asterisk have also been received in the Office of His Majesty's Trade Commissioner, 3, Wittet Road, Ballard Estate, Bombay, where they may also be consulted by "*bonâ fide*" firms or individuals.

In addition, His Majesty's Trade Commissioner, Bombay, has recently received the undermentioned catalogues:—

Names and addresses.	*Description.*
Beldam Asbestos Co., Ltd., Lascar House, Hounslow.	Packings.
E. J. Riley Ltd., Willow Mills, Accrington.	Billiard Tables.
Veritys Ltd., Aston, Birmingham.	Motors, Control Gear, Fans, Lighting Equipment.

TRADE ENQUIRY.

The name of the United Kingdom firm referred to in the enquiry mentioned below will be furnished to reputable firms on application to His Majesty's Senior Trade Commissioner, Post Box 683, Fairlie House, Fairlie Place, Calcutta.

No. 1715-32.

A United Kingdom firm of wholesale, export and manufacturing stationers producing envelopes, account books, writing pads, compendiums, stationers' sundries, etc., is desirous of getting in touch with a suitable agent to undertake their representation.

MGIPC—L—461HMTC—10-2-33—1,050.

H. M. TRADE COMMISSIONERS IN INDIA.

Calcutta—

Sir Thomas M. Ainscough, C.B.E.,
His Majesty's Senior Trade Commissioner in India and Ceylon.

Mr. R. B. Willmot,
His Majesty's Trade Commissioner at Calcutta.
Post Box No. 683, Fairlie House, Fairlie Place.
Telegraphic Address.—" Tradcom, Calcutta."
Telephone No.—" Calcutta 1042."

Bombay—

Mr. W. D. M. Clarke,
His Majesty's Trade Commissioner at Bombay.
Post Box No. 815, 3, Wittet Road, Ballard Estate.
Telegraphic Address.—" Tradcom, Bombay."
Telephone No.—" Bombay 23095."

Ceylon—

Imperial Trade Correspondent,
The Principal Collector of Customs, Colombo.

With Compliments.

FEBRUARY **1933**

The
Commercial Bulletin

A Monthly Review of Official and other
announcements relating particularly
to British Export Trade

Issued by
HIS MAJESTY'S SENIOR TRADE COMMISSIONER
IN INDIA AND CEYLON.

FAIRLIE HOUSE,
FAIRLIE PLACE,
CALCUTTA.

CONTENTS.

PAGE.

GENERAL 1

FINANCE 2

CONTRACTS SECURED 3

IRON AND STEEL 5

MACHINE TOOLS 8

POTTERY AND GLASSWARE 9

TEXTILES 13

AUTOMOBILE AND ALLIED TRADES 17

AVIATION 21

CATALOGUE LIBRARY 24

GENERAL.

The recently published Board of Trade Returns show that the exports of United Kingdom goods during 1932 reached a total of £365,138,000. It can, therefore, be said that the country is exporting goods manufactured within its borders to the extent of nearly £1,000,000 per day, and that in spite of the unparalleled depression Great Britain is maintaining her position among the exporting nations of the world.

While the exports for the whole of the year represent a contraction of 6½ per cent. as compared with those of the previous year, 1932 closed with certain gratifying features.

The exports of United Kingdom goods in December at £32,445,347 were higher than any month of the year with the sole exception of April, and the fact that, according to returns issued by the Ministry of Labour, there were over 76,000 more insured persons employed on December 19th than a month earlier is an indication of improving conditions which it is to be hoped will be maintained.

In the last four months of the year, as will be seen from the following figures, exports have steadily been increasing; this has meant expanding activities in manufacturing centres:—

	£
September	26,228,666
October	30,440,149
November	31,093,687
December	32,445,347

Imports during 1932 amounted in value to £703,132,725, a decline of £158,000,000 as against the previous year. While the decrease in imports of raw materials was only just over £8½ million, the drop in imports of manufactured articles was no less than £104,000,000 or nearly 66 per cent. of the total fall.

The encouraging features to which reference has been made strengthen the hope that a further improvement in the situation will be evidenced in the current year.

FINANCE.

NEW COMPANIES.

The Richard Garrett Engineering Works, Ltd.

Formed as a private concern to carry on the business of agricultural and transportation engineers. The company will take over the business of Richard Garrett and Sons, a subsidiary of Agricultural and General Engineers, Ltd., which is in liquidation.

British " Ven-Wrap ", Ltd.

Registered as a public company with a capital of £100,000 in 5s. shares, to carry on the business of manufacturers of and dealers in Viscose paper, yarns, fabrics, paper wrappings of all kinds.

T. Roberts & Sons (Leicester), Ltd.

Registered as a private company with a capital of £110,000. The company has been formed to acquire the business of boot and shoe manufacturers carried on at the Portland Shoe Works, Leicester, as T. Roberts & Sons.

AMALGAMATIONS.

Henry C. Stephens, Ltd.

The directors of Henry C. Stephens, Ltd., 57, Aldersgate Street, E.C.1, manufacturers of writing inks, announce that they have acquired from the V. K. Rotary Company the goodwill, trade marks and all rights in connection with the manufacture and sale of adhesive paste " Grip-Fix."

In future all orders for " Grip-Fix " will be supplied by Henry C. Stephens, Ltd.; manufacture will be carried out at the company's works at Highbury.

T. H. Downing and Co., Ltd. and Thomas Morley and Son.

These two old-established Leicester hosiery manufacturers and warehousemen have amalgamated. Formed early last century, T. H. Downing & Co. was registered as a public company in 1920. The issued capital is £708,550. Thomas Morley & Son, which is a private company, was established in 1869. Its specialities include hosiery and knitted goods. The title of T. H. Downing & Co. will be retained.

Increases in Capital.

	£
J & C Boyle & Co Ltd (brick manufacturers)	154,061
United Canners, Ltd	299,000
Rafidain Oil Co , Ltd.	349,900
Cement Industries, Ltd	99,900
Cussons Sons & Co , Ltd (soaps, toilet preparations)	90,000
United Indigo and Chemical Co , Ltd.	95,000
Klaxon, Ltd (warning signal manufacturers)	43,003
Crompton Parkinson, Ltd. (electrical engineers)	173,231
Ebbw Vale Steel, Iron & Coal Co , Ltd (simultaneous reduction and increase)	3,275,000
Willys Overland Crossley, Ltd (motor car manufacturers)	337,500
Greaseproof Paper Mills, Ltd.	200,000
Albert E Reed & Co , Ltd (paper manufacturers)	225,000

CONTRACTS SECURED.

Aero-engines for Denmark.

The Danish Air Transport Company has placed an order for Bristol-Jupiter engines, of which the value is estimated at approximately £5,000, in connection with a new machine for passenger service on the Berlin route.

Coal for Swedish State Railways.

The Swedish State Railways have purchased 12,000 tons of coal from the Broomhill Colliery Company.

Egyptian Coal Contract award.

Messrs. T. Beynon and Co., the Cardiff coal exporters, have been awarded a contract by the Egyptian State Railways for the supply of 66,000 tons of coal.

Coal for Denmark.

A contract has been secured by the Yorkshire Amalgamated Collieries for the supply over the next 18 months of 50,000 tons of washed nuts to the Copenhagen Electricity Works.

British Locomotives for China.

The North British Locomotive Co., Ltd., Glasgow, have secured an order from the Tientsin-Pukow Railway, China, for eight Pacific-type locomotives and tenders.

Four Orders for British Yachts.

The British Engineers' Association reports that four orders have been placed during recent weeks with Messrs. John I. Thornycroft & Co., Ltd., by British or Continental buyers for seagoing motor-yachts, varying in size from 70 ft. to over 200 ft. It is many years since four such luxury craft were under construction by one firm at the same time. The value of these orders is stated to be in excess of £100,000.

Orders for British Engineers.

The Whessoe Foundry and Engineering Co., Ltd., of Darlington, and the Motherwell Bridge and Engineering Co. have jointly secured a contract for petrol storage tanks to be erected at Haifa, Palestine, for the Iraq Petroleum Co., Ltd. The value of the contract, which was secured in the face of world-wide competition, is £160,000. Some 8,000 tons of steel of United Kingdom manufacture will be used in the construction of the tanks.

The Birtley Co., Ltd., of Birtley, County Durham, have secured three orders for coal-cleaning plant, valued at £40,000. The orders are for the Dawdon Colliery, Durham, owned by Londonderry Collieries, Ltd. and for Czechoslovakia and Holland.

Telephone exchange for Egypt.

A Government contract has been secured by Standard Telephones and Cables, Ltd., for the supply of a rotary automatic telephone exchange for Heliopolis, a suburb of Cairo. The value of the contract is £30,000.

Aero Engines for Holland.

An order for a considerable number of Rolls Royce "Kestrel" aero engines has been given by the Netherlands Government.

Aero Engines—Bulgarian Government.

The Aviation Department of the Government of Bulgaria has recently placed a trial order for a "Gipsy Major" (De Havilland) aero engine.

Aeroplanes for Belgium.

The Belgian Government has recently placed a further repeat contract with the Fairey Aviation Company of Hayes, Middlesex, for Fox day bombers and Firefly single-seater fighters, both types with the Kestrel engine. The Belgian Government had previously ordered no fewer than 98 similar machines. The size of the new order is not revealed but it is understood to be considerable.

Steel Girders for Egyptian Government.

A contract for the supply of mild steel girders to the value of £2,150 has recently been placed with Messrs. H. J. Skelton & Co., Ltd., London.

Orders from Egypt.

The Egyptian State Railways and Ministry of the Interior have placed further contracts in the United Kingdom to a total value of £11,250, as follows:—

Cables:—

Messrs. Callenders Cables & Construction Co., Ltd.

Messrs. Pirelli, Ltd.

Water main pipes and accessories:—

Messrs. The Stanton Ironworks Co., Ltd., Nottingham.

Insulators:—

Messrs. Bullers, Ltd., London.

Luggage Lifts:—

Messrs. Marryat & Scott, Ltd., London.

IRON AND STEEL.

The National Federation of Iron and Steel Manufacturers state that there were 60 furnaces in blast at the end of December, which is one more than at the beginning of the month. The production of pig-iron in the month amounted to 284,500 tons as compared with 267,700 tons in November. The December figures bring the total pig-iron output for the year to 3,573,000 tons as against 3,772,600 tons in 1931. This United Kingdom figure is thus about 95 per cent. of that for the previous year. On the figures of world production which have been recently estimated in Germany, the world production in 1932 was 70 per cent. of that for the previous year. As compared with the United Kingdom figure of 95 per cent., the other four leading iron and steel countries in the world are given as follows:—

	Per cent.
U. S. A.	48
Germany (Customs Union)	64
France	67
Belgium	76

The output of steel ingots in December amounted to 430,400 tons, a drop of over 40,000 tons on the November figure. The raw steel figures for the year reached a total of 5,256,800 tons, as compared with 5,202,600 tons in 1931. Taking the 1931 production as represented by 100, the United Kingdom figure for 1932 is thus 101 compared with 71 for the world on the basis of the German estimates of raw steel production. The corresponding figures for the leading steel producing countries are as follows:—

	Per cent.
U. S. A.	53
Germany (Customs Union)	69
France	70
Belgium	89

The United Kingdom is thus the only one of the leading iron and steel countries that has not experienced a serious fall in production as compared with the immediately preceding year.

The past year, which was notable for the introduction of a tariff or customs duty on imported iron and steel into the United Kingdom, shows the marked effect of this change of policy in the figures for the imports. The total for the twelve months of 1932 is given in the official returns as 1,592,243 tons as compared with 2,844,814 tons in 1931.

On the export side, the 1932 total is 1,888,574 tons, a very slight decrease on that for 1931, which was 1,978,958 tons. This satisfactory result, taking into consideration the fact that world consumption has greatly diminished during the year, is mainly due to the increased competitive power of the United Kingdom industry through the abandonment of the gold standard. Several of the principal industries connected with iron and steel have definitely improved their position as compared with a year earlier; in fact, the decrease in tonnage is practically accounted for by one of the principal items, namely, rails and permanent way railway material. In this trade, the export total for the twelve months is 105,866 tons as compared with 205,880 tons in 1931. Improvement in railway demand can only be looked for in a general trade revival.

The tinplate industry is in a comparatively enviable position, not only in respect of competitive power abroad, but also through developments in the home canning industry. If recent plans for the establishment of canning factories in the Empire, and particularly in the United Kingdom, mature, the tinplate trade has every reason for optimism. It is estimated that the present home canning output has increased the consumption of tinplates by 25,000 tons per annum. The export business for the year at 463,189 tons is approximately 63,000 tons higher than in 1931.

The galvanised sheet industry, although comparatively quiet, is maintaining its position and there is some prospect that two of its former principal markets, namely, India and Australia, will again become substantial purchasers. The total for 1932, at 278,318 tons, is slightly less than the figure for 1931 (287,310 tons). On the whole the future may be regarded with increased confidence.

The year's export of heavy steel plates was twice as great as that for last year. The figures are 133,941 tons and 65,612 tons respectively; this in spite of the fact that the erstwhile principal markets have taken as little or less than in 1931. The principal new market is Canada, in which country the selling organisation of the heavy steel rollers has been eminently successful. In the lighter steel plates category trade has declined, the decrease being particularly evident in the cases of the Japanese and Argentine markets.

In the cast iron pipe industry, while the business received from some of the old markets has been disappointing, this has, to a large extent, been made up for by business from other quarters, and since sterling left the gold standard the United Kingdom has been able to compete in markets where previously trade was impossible. The steel tube industry is similarly situated. Exports of steel tubes at 152,547 tons for the year are over 20,000 tons higher than last year. Considerable inroads into foreign competitors' trade have been made within the last few months.

The wire drawing trade, while not of such importance in the heavy iron and steel industries as those mentioned, has experienced a better demand from overseas, particularly in fencing and barbed wire, the exports of which reached the figure 19,316 tons compared with 12,090 tons in 1931. The totals of iron and steel wire for all purposes for 1932 and 1931 were 42,688 and 37,676 tons, respectively.

Of the remaining items, mainly of less importance, there has been no appreciable change in the volume or direction of export trade.

Corrugated Steel Wood-Fasteners.

These fasteners, which are largely used in the manufacture of packing cases, wood frames, etc., etc., have until recently not been manufactured to an appreciable extent in the United Kingdom. Messrs. Matthew Wylie & Co., Ltd., of Portman Street, Kinning Park, Glasgow, S.1, are now manufacturing corrugated fasteners in coil and cut form, saw and plain edge types for all the usual purposes to which such fasteners are put.

MACHINE TOOLS.

Duplex vertical-spindle drilling and reaming machine.—John Holroyd & Co., Ld., Milnrow, near Rochdale, have recently introduced a duplex vertical-spindle machine for drilling and reaming the taper cotter holes in locomotive connecting rods with the strap in position. Two holes are dealt with at the same time, the maximum diameter of hole drilled being 1¼ inches, and the maximum and minimum centres of the spindles 6 inches and 2¾ inches respectively.

The holes on one side of the connecting rod are first drilled up to the centre, and the rod is then turned over by rotating the work fixtures through 180 degrees. The drills are next changed to the larger size so as to remove as much metal as the taper of the hole will allow and then replaced by boring bars having a number of small round inserted tools for boring the hole in a series of steps approximating to the taper to be produced.

The two spindles are mounted upon adjustable slides for varying the pitch of the centres and the drive is transmitted by universal couplings and worm gearing through a gear box. With quickly changed slip gears, of 32 and 48 teeth, eight spindle speeds are available ranging from 44 to 258 r.p.m. The drilling head has a vertical traverse on the column of 3 feet.

The drive is obtained from a self-contained 7½ h.p. motor which is mounted on the top of the weight-balanced head. The feed motion is operated by an automatic dial-feed trip mechanism. The power feed is engaged by a friction clutch and both quick-traverse and fine hand-feed motions are embodied. An adjustable bracket is fitted on the front face of the upright for carrying the drill guide bushes, which are arranged on interchangeable plates, according to the holes to be drilled.

The work-supporting heads on the cross beams are each fitted with a fixture for accommodating the connecting rod. The fixture for gripping the large end of the rod is in the form of a vice, and can be rotated by pilot handle. The small end of the connecting rod is supported in a simpler fixture, which is also free to rotate, so that both sides of the rod can be drilled. The floor space occupied by this machine is 12 feet by 8 feet.

A. Butterworth & Co., Ainsworth Street, Rochdale, are experiencing a steady demand for all sizes of bar automatics, and the inquiries received are of an encouraging character. Among recent orders is a 3½-inch bar machine for the Admiralty, and a 1⅛-inch machine for India.

Frederick Town & Sons, Mile Cross Works, Halifax, have in progress radial drilling machines from 32-inch to 60-inch radius. A 54-inch radius machine is being prepared for one of the Admiralty workshops. Crank shaping machines under way include 12/14-inch stroke machines and a 24/26-inch stroke machine for South Africa.

George Swift & Sons, Ltd., Claremont Ironworks, Halifax, have just completed a 9-feet super-radial drilling machine for one of the dockyards, while a number of lathes are in progress for other Service Departments.

POTTERY AND GLASSWARE.

There has been little change in conditions during the last few weeks in the Pottery Industry. For the next few weeks, a quiet period is anticipated so far as the home trade is concerned, but general prospects are not unfavourably regarded.

Following is a review of the pottery trade for the year 1932. It will be seen that the final figures for exports show a very substantial decrease both as regards quantity and value when compared with those for the three preceding years.

The total quantity and value of exports of pottery of all classes (excluding bricks) during the years in question were:—

Year.	*Quantity exported.* Cwts.	*Value.* £
1932	2,525,652	2,954,265
1931	3,862,286	3,462,314
1930	4,576,774	5,130,808
1929	5,010,253	6,292,895

the decrease in 1932, compared with 1931, representing 34·6 per cent. in quantity and 14·7 per cent. in value.

Taking the various sections of the industry, the following indicates the results obtained:—

Tiles (all classes).

	Quantity. Cwts.	*Value.* £
Exports 1932	222,736	201,521
Exports 1931	269,124	255,334

representing a decrease of 46,388 cwts. or 17·2 per cent. in quantity and £53,813 or 21·2 per cent. in value. In view of the slowing down of building operations in various parts of the world, this section of the trade was bound to feel the effect on its export trade. It is believed however, that, during the past twelve months, it has been enabled to secure a larger proportion of the trade to meet home requirements. The total imports of tiles into the United Kingdom during 1932 were valued at £167,463 as compared with £655,404 in 1931, a decrease of £487,941 or 74·4 per cent.

Sanitaryware (all types).

	Quantity. Cwts.	*Value.* £
Exports 1932	418,859	567,217
Exports 1931	623,167	792,251

representing a decrease of 204,308 cwts. or 32·8 per cent. in quantity and £225,034 or 28·4 per cent. in value.

The exports of sanitaryware have of course also been adversely affected by the slowing down of activities in the building trade.

Chinaware.

	Quantity. Cwts.	Value. £
Exports 1932 . .	18,228	231,357
Exports 1931	15,833	245,102

representing an increase of 2,395 cwts. or 15·1 per cent. in quantity but a decrease of £14,045 or 5·7 per cent. in value.

The decrease in the value of exports in 1932 is due principally to the heavy fall in the exports of fine chinaware to the United States and Canada. No improvement in the fine chinaware section of the trade can be looked for until there is a material change in the general trade conditions in the United States, the principal export market for these wares.

Electrical ware (including insulators) and door fittings.

	Quantity. Cwts.	Value. £
Exports 1932	31,312	92,355
Exports 1931	34,002	95,874

representing a decrease of 2,690 cwts. or 7·9 per cent. in quantity and £3,519 or 3·7 per cent. in value.

General earthenware (including Jet, Rockingham and Samian ware, Red Pottery and Terra Cotta).

	Quantity. Cwts.	Value. £
Exports 1932 . . .	437,192	1,497,466
Exports 1931 . . .	427,614	1,582,339

representing an increase of 9,578 cwts. or 2·2 per cent. in quantity but a decrease of £84,873 or 5·6 per cent. in value.

In value this is the most important export section of the pottery industry. With a view to stimulating business, reductions (in some cases of a substantial character) have been made in selling prices. This tendency is reflected in the figures given above.

Stoneware, brown and yellow ware.

	Quantity. Cwts.	Value. £
Exports 1932	29,508	32,115
Exports 1931	58,137	43,467

representing a decrease of 28,629 cwts. or 49·3 per cent. in quantity and £11,352 or 26·1 per cent. in value.

Refractory goods and clay products not elsewhere specified.

	Quantity Cwts.	*Value.* £
Exports 1932 . . .	1,367,817	332,234
Exports 1931 . . .	2,434,409	447,647

representing a decrease of 1,066,592 cwts or 43·8 per cent. in quantity and £115,413 or 25·8 per cent. in value.

This section of the pottery trade supplying, as it does, refractory materials used in industry generally is severely affected by the general world depression in trade.

The following table deals with the various export markets for the year 1932 with comparative figures for the year 1931:—

Market.	*Value of United Kingdom Exports* 1932. £	1931. £	*Inc. or Dec.* *Inc.* £	*Dec.* £	*Inc. or Dec. % over 1931.* *Inc.*	*Dec.*
Canada	605,338	701,716	—	96,378	—	13·7
Irish Free State	281,939	291,152	—	9,213	—	3·2
United States	261,412	362,512	—	101,070	—	28·0
Australia	234,219	149,201	85,015	—	57·0	—
South Africa	186,443	203,640	—	17,197	—	8·4
India .	143,215	149,194	—	5,979	—	4·0
Argentina	125,990	205,600	—	79,610	—	38·7
New Zealand .	125,268	170,325	—	45,057	—	26·5
Brazil	80,328	53,963	26,365	—	49·0	—
France . .	29,213	48,067	—	18,854	—	39·2
Other countries not separately specified	880,870	1,126,941	—	246,071	—	21·8
Total	2,954,265	3,462,314	—	508,049	—	14·7

The exports to Canada and the United States continue to show serious declines. In 1929, before the general depression in trade commenced, the values of the exports to these two markets were:—

	£
Canada	948,651
United States	833,339

The increase of 57 per cent. in the value of exports to Australia is a satisfactory indication of improving conditions in that market. The volume of trade is however still far below normal, the value of pottery exports to Australia in 1929 being £798,283.

The New Zealand market at present shows no sign of recovery. Exports of pottery to this market in 1929 were valued at £370,810.

Glass and Glassware.

The value of the exports of glass and glassware during 1932 was lower than that of the exports of any of the three immediately preceding years as will be seen from the following figures:—

	£
Total value of all glassware exports, 1932 .	1,265,661
Total value of all glassware exports, 1931 .	1,367,171
Total value of all glassware exports, 1930 .	1,851,615
Total value of all glassware exports, 1929 .	2,268,169

the decrease in 1932, compared with 1931, being £101,510 or 7·4 per cent.

Following are details of the exports in 1932 and comparative figures for 1931, for each section of the industry:—

Section.	*Value of Exports.*		*Inc. or Dec.*		*Inc. or Dec. % over 1931.*	
	1932.	*1931.*	*Inc.*	*Dec.*	*Inc.*	*Dec.*
	£	£	£	£		
Glass bottles and jars . .	269,841	245,670	24,171	—	10·0	—
Plate and sheet glass .	679,285	765,117	—	85,832	—	11·2
Domestic machinery and illuminating glassware .	190,118	209,017	—	18,899	—	9·0
Scientific, including glass tubing and rod	87,630	102,517	—	14,887	—	14·5
Other types	38,787	44,850	—	6,063	—	13·5
Total .	1,265,661	1,367,171	—	101,510	—	7·4

Detailed information is not at present available in regard to the various overseas markets to which exports of glass and glassware were made in 1932.

TEXTILES.

COTTON.

Raw Cotton.

Prices on the Liverpool market have recovered somewhat since Christmas, but with the exception of Fully Good Fair Sakels, they are not up to the level of a year ago, nor are they yet steady enough to please spinners. The available stocks of American cotton are almost as large as they were at the beginning of last year, and this, together with a certain deterioration due to careless picking, of which spinners have recently complained, makes a substantial rise in prices unlikely. The growers in the Southern States of the United States, however, appear to expect a rise, and refuse to sell. Nothing definite is yet known as to Government proposals in respect of acreage reduction or of farm relief, and the most widely differing prophecies are to be heard. It seems to be generally admitted, however, that neither acreage reduction nor an increase in consumption by the mills can increase demand sufficiently to cause any rise in prices for some time to come.

Manchester Market.

Prices in Manchester remain unsatisfactory, though better than they have been of late. Enquiry is growing more general, and both spinners and manufacturers have been more active, and better able to clear their output. Trade in cloths is still confined to small lots, and overseas buyers have not yet sufficient confidence to increase their orders.

The Far East market has been very quiet, though some white shirtings have been booked for Shanghai, and fine fancy goods for Java and Singapore. Egypt and the Near East have taken bleaching cloths, and West Africa cloths for dyeing, both somewhat spasmodically.

From the Dominions there is some demand for fancies and rayon goods, and Australia and South Africa continue to buy drills and heavy cloths. The Continental bookings remain small and confined to fine goods, though Scandinavia has recently taken several lots of finishing cloths.

Yarns.

American yarns have been in some demand in coarse and medium counts, and a few orders have been booked for dhooty yarns. Egyptian yarns have recently been bought in fine counts, especially 90's twist and 120's weft. Spinners are in a better position now to resist attempts to lower prices, and demand seems to be on the increase.

The December exports of all classes of cloth and yarn show a considerable increase over those for November, and, in the main, over those for December, 1931. The figures are as follows:—

	December 1932.	*November 1932.*	*December 1931.*
	1,000 lbs.	*1,000 lbs.*	*1,000 lbs.*
Cotton yarns, grey, unbleached .	10,135	8,673	13,783
Cotton yarns, bleached and dyed .	1,607	1,302	1,140
	1,000 sq. yds.	*1,000 sq. yds.*	*1,000 sq. yds.*
Cotton Piece Goods—			
Grey	37,404	31,227	26,261
Bleached	67,953	54,522	50,574
Printed.	34,504	29,888	26,574
Piece dyed	45,680	35,077	38,548
Yarn dyed	10,282	8,495	7,742
Total Piece Goods .	195,823	138,447	149,699

WOOL.

Unlike semi-manufactures, the export of which during 1932 shows a substantial increase, an analysis of the export of woollen and worsted tissues in 1932 shows a percentage decline over the quantities exported in 1931 of approximately 5 per cent. The trade has been continuously handicapped by currency restrictions and quotas, and it is satisfactory that the decline has not been more serious; moreover the continued and increasing use by women of knitted outerwear has proved an added outlet for wool and yarns to the detriment of woven tissues. All the Dominions, except Canada, increased their imports of woollens from the United Kingdom during last year as compared with 1931, but with the exception of the group of markets shown under the heading " Other Countries " only five other small markets—Denmark, Egypt, Mexico, Colombia and Peru—did so, whilst reduced quantities were exported to no less than eighteen countries, including our best woollen markets, *e.g.*, Canada, China, Japan, the United States of America, Argentina, France, Belgium, the Netherlands and Germany.

The export of worsted tissues within the Empire increased to Australia, New Zealand and India and declined to Canada, South Africa and the Irish Free State. Amongst foreign markets larger quantities were sent to Norway, Denmark, Holland, Austria, Egypt, Peru and " Other Countries." On the debit side are twenty countries including the three Dominions referred to. China, Japan, the United States of America, the Argentine, France, Belgium and Germany imported less worsteds as well as woollens from the United Kingdom. The Far East and the South American Republics together with Eastern Europe are the most disquieting areas, whilst the Scandinavian countries are at the moment amongst the best markets. Stocks everywhere are reported to be very low and fabrics are cheap. What is required is some headway towards solving the difficulties of finance. When some success in this direction has been achieved there will doubtless be an expansion in the demand for United Kingdom wool textiles despite the present vogue for wearing home produced goods. The industry can be said to have captured the home market, but this with the present restricted exports is not sufficient to keep all the available machinery running.

A new fabric for trousers to compete with flannel was referred to in these notes last December, when it was described as being of a greenish or Lovat shade. This cloth has now been developed further and given the name of "Concord" fabric. The cloth is being woven in three designs, plain, gaberdine, narrow herring bone and broader herring bone, and each has at present four shades, light green, dark green, light beige and dark beige. The herring bone is used for coat and vest and the trousers are made from the plain material. The cloth is a fine worsted milled finished cloth in 14 and 16 oz. weights and can also be used for *plus* four suits. It is reported that worsted linings are being produced to match the cloth.

LINEN.

Flax prices continue everywhere to increase. Indeed the limited amount of flax available would seem to justify increases. At the same time, in the face of the continued low prices of competing textile raw materials, spinners are finding it impossible to increase yarn prices proportionately and will strongly resist further increases in the price of flax. The Northern Ireland Ministry of Agriculture reports an increase to 8*s*. 4*d*. per stone from 8*s*. per stone in the average price of home-grown flax.

There is more Irish flax now in the markets, but the quantities available remain small. The improvement in flax prices and the low returns on other crops should encourage a larger sowing of flax this year.

The demand for yarn shows little change. Northern Irish spinners are supplying the bulk of the requirements of the home market and are also able to compete in foreign markets, but weavers are not buying in any quantity, and in view of the higher cost of raw material, prices are unremunerative.

Weavers complain that business is dull in the home market, but according to the Trade and Navigation Returns for December, export business was fairly good during the month in most lines, the exceptions being linen thread, and sail-cloth and canvas. This improvement stands out the more strongly as exports for the year expressed in terms of the pound were smaller than in 1931.

Encouragingly large exports were made to Canada (£15,788) and Australia (£32,508) among the Dominions, during the month, and to Brazil (£31,963), among foreign countries. Trade with the United States of America also showed a marked improvement (£130,225).

The value of the linen goods imported into the United Kingdom in December last was £24,136 as compared with £34,751 in December, 1931, and £60,694 in December, 1930. The value of such imports for the year ended 31st December, 1932, was £448,288; for the year ended 31st December, 1931, £711,436; and for the year ended 31st December, 1930, £908,165.

The value of the exports of linen goods from the United Kingdom in December last was £498,840 as compared with £445,554 in December, 1931.

The total value of linen goods exported during the twelve months ended 31st December, 1930, 1931, 1932, were respectively £7,444,669, £5,431,512 and £5,272,304, and the quantities of linen piece-goods exported during the same periods were 61,450,500 square yards, 65,341,700 square yards, and 65,965,300 square yards.

AUTOMOBILE AND ALLIED TRADES.

RESEARCH AND STANDARDISATION IN BRITISH MOTOR INDUSTRY.

It will be at once apparent, even to the most casual student, that the modern British car has attained its present efficiency largely as the result of intensive research by and on behalf of the industry, and that, in producing the up-to-date model, and ensuring that it shall be adequately serviced, there has been allied to such research a degree of standardisation.

It will be realised that experiments of a developmental nature take a very necessary part in the production of the successful mechanically-propelled road vehicle. In this connection recent developments by the Institution of Automobile Engineers, of London, are of interest and important to the industry.

This Institution has been in existence for twenty-five years, and has a membership comprising all the leading technical men in the British automobile industry. Much useful work has been accomplished during that period in the dissemination of technical information, and there has recently been formed a Research and Standardisation Committee of the Institution.

The function of this Committee, so far as research is concerned, embraces problems common to the industry in which mutual helpfulness is practicable and desirable. Co-operation is possible in two broad directions. In the first place, data from British and foreign technical publications are pooled in a Bureau of Information which is available for the benefit of the industry. Application to this source of information may save a manufacturer time and expense by preventing his engaging upon work which has already been done, thus enabling him to develop on the groundwork already covered, rather than by having to start *de novo*.

Further, those problems which are fundamental or common to the industry as a whole can be studied experimentally either at the Committee's laboratory or at any other suitable research centre. Such problems can be dealt with scientifically and quietly in a manner difficult to cultivate in a "trouble-curing" department.

A subject which has recently been dealt with along these lines at the Committee's laboratory at Chiswick is that of the wear of brake-drum and clutch-plate materials, a matter of considerable interest to manufacturers of vehicles, pressings, friction linings, etc. Investigation is also proceeding into cylinder and piston wear, the results of which must be of interest and importance to the industry.

STANDARDISATION.

Standardisation does not restrict either design or development, for one of the primary objects of standardisation is to ensure interchangeability and to obtain correct mating of component parts. The ultimate purpose of standardisation is to effect reduction in costs, and it is in this connection that manufacturers are in a most favourable position to assist.

It is not to be expected, especially under present conditions, that a supplier will lay down jig and tool equipment and manufacture and stock against speculative demand. Yet, in a number of instances the adoption of standards on an extensive scale can encourage the manufacturer to undertake quantity production on a scale greater than would otherwise be warranted, with the result that a reduction in costs can be achieved.

The question of British Standards generally is, of course, dealt with by the British Standards Institution, with which body the I.A.E. maintains a close relationship. Among its activities, the British Standards Institution is responsible for all British Standard Specifications relating to materials, including those employed generally in automobile construction. The various technical committees of the B.S.I. dealing with Automobile Specifications include on their personnel representatives of the I.A.E., through whom the views of the automobile industry are presented.

The Standards Committee of the I.A.E. is responsible for Standards which deal with dimensions of particular concern to the automobile industry. The outcome of the work of the Standards Department is issued to the industry as I.A.E. Standards by means of Data Sheets, which are, in many cases, strengthened by the issue of lists of firms who manufacture and supply from stock in accordance therewith.

While the results of actual research are available only to affiliated manufacturers of the Institution, all other papers, etc., are distributed to the whole of the Institution's membership.

NEW BRITISH CAR MARKETS IN CANADA.

As a result of the Ottawa Conference, new markets for British motor manufacturers have been opened up in Canada.

A company, known as Empire Sports Cars of Montreal, has been formed to handle the M. G. distribution in Canada alone. Although the charter to sell cars was only granted to the firm a short time ago, they have already placed a substantial order with the M. G. Company.

LONDON BUSES FOR MADRID.

Madrid will shortly have some London type buses in service, for the Madrid Tramways have placed an order with the Associated Equipment Co., Ltd., of Southall, for four double-deckers. Three of these will be driven by 120 h.p. petrol engines, and the fourth by the A.E.C. 130 h.p. high-speed oil engine, which is now incorporated in a large number of London buses. The bodies—seating 56 passengers—will all be of the luxury type with which Londoners have been familiar for the past two years.

The order for these vehicles—which will introduce a hitherto unknown standard of transport into the capital of Spain—was obtained through the Marques de Sales, A.E.C.'s agent in that country.

UNUSUAL CARAVAN.

With a view to instructing Malays and Indians on agricultural and co-operative subjects, by means of lectures, exhibits, lantern slides, and moving pictures, the Government of the Federated Malay States has had built an interesting "rural lecture caravan" which is mounted on a Morris-Commercial 30-cwt. chassis.

The Coachwork was constructed by the Malay States Railways and the exterior tastefully finished in royal blue and ivory. The body contains living quarters for two lecturers, besides housing a cinematograph projector and much additional equipment. The generator for the projector unit is driven by an endless belt running round the jacked-up off rear wheel of the vehicle, whose engine, turning under such circumstances at 15 m.p.h. delivers a steady voltage of 120.

●

TELLING THE WORLD.

The world prestige of the British motor industry will be given a fillip by the Austin film which is now being exhibited in India, Australia, South Africa, Spain, New Zealand and the Malay States and is shortly also to provide series of showings in Denmark, Belgium, the West Indies and United States of America.

Altogether, 28 copies of the Austin film are now in circulation at home and abroad.

A NEW DESIGN OF TROLLEY BUS.

Not a little controversy still exists amongst trolley bus authorities as to whether the trolley bus, designed and built as a trolley bus from start to finish, is preferable to the railless vehicle based on petrol bus-chassis design. The former, being designed entirely for the work which it has to do, is probably the better vehicle, other things being equal, but the latter has the advantage of having a large number of units which are interchangeable with a similar make of petrol vehicle, and so may be preferable in mixed fleets.

Leyland Motors, Ltd., has for many years had considerable success in building trolley-bus chassis, the basis of which is the petrol chassis, but in spite of the fact that large numbers of these are giving excellent service, this Company has now decided to modify its policy in order better to meet modern conditions of city transport, and to design a trolley bus, from the outset, for trolley bus work.

The long experimental period is now over, and preparations are in hand for full production. The electrical equipment will be, as previously, supplied by the General Electric Company.

Several chassis will be offered. There are to be two 2-axle chassis catering for single and double-deck bodies, and one 3-axle chassis which will be suitable for the various classes of bodies at present in use on trolley bus work. An order for a large fleet of the 2-axle type has already been placed by a prominent Welsh operator.

AVIATION.

AERIAL MEDICAL SERVICES.

In the remote " outback " of Australia the world's first civil aerial medical service cares for the health of the inhabitants of a region covering a quarter of a million square miles, equivalent in size to Germany, Austria, Switzerland and Denmark combined. Working in conjunction with radio, the aeroplane has spread a mantle of security for white men and natives which has notably eased conditions of life in some of the most primitive territory to be found on the surface of the globe.

Little is known outside Australia of this important and beneficent work; the first full account of it, given by Dr. W. D. Walker, an Adelaide physician who has spent several years in the interior of the continent, in a lecture to doctors and flying men at a London hall the other day, deserves the attention of all who are entrusted with the care of relatively undeveloped regions where means of communication and transport are still elementary.

The service began work in May, 1928, from a base at Cloncurry, Queensland. From the first it was successful; the territory covered has grown in extent and the number of patients advised and treated has increased every year. In the first 12 months of working, Dr. St. Vincent Welch, the first " flying doctor ", flew 20,000 miles to attend 255 patients, and held 42 consultations in 26 different centres. To-day the work occupies four medical men, and big plans are under consideration which would embrace the whole of the remote regions of the continent in a single scheme.

The "flying doctors" move in response to urgent calls for help which are received at the base by wireless. Before the service was launched small, inexpensive radio sets were distributed among the remote homesteads. The apparatus derives power from a compact, foot-pedalled generator and the useful range of each set is 600 miles. With this equipment installed in his home, the loneliest settler has skilled medical advice, and, if necessary, the immediate attendance of a physician or surgeon, at his disposal. At first the family operator was obliged to learn morse, but a recent improvement to the apparatus enables messages to be translated automatically into morse signals and sent out simply by tapping a lettered keyboard similar to that of a typewriter.

Messages in morse received at the central stations are retranslated into words and taken at once to the doctor on duty. He sends back advice or, if the case calls for more urgent treatment the aeroplane is at once got ready and within a few minutes the expedition, which may consist of nurse, surgeon and medical gear, is on its way. Arrived near the destination the pilot searches for white sheets spread on the ground to indicate a suitable landing place; he gauges the direction and strength of the wind from the behaviour of the smoke of a wood fire and descends.

The aeroplane which does most of this invaluable work at the present time has room to accommodate in a saloon cabin doctor, nurse, patient (should removal to hospital be essential) and one other individual, who is usually a friend or relative of the patient. Soon larger aircraft may be acquired, and an anaesthetist and complete surgical unit airborne in addition to the load now carried. Plans for future development include the aerial survey of large areas not yet charted and the provision of more landing grounds and radio stations. Ultimately the organizers hope to establish a complete national service, comprising fully equipped base hospitals spaced to cover between them all of the sparsely settled and inaccessible regions of the continent.

Though this civil air medical service is unique, the military air services of the world have employed aeroplanes for the transport of sick and wounded men for many years. The system has proved of immense value in countries such as Morocco and Iraq; in the latter country aerial evacuation is routine practice of the Royal Air Force, no other method of transport being used for carrying casualties from the sphere of active operations to the base. The result is the marked alleviation of the pain and discomfort of travelling.

Latest available statistics show that in 1931 no fewer than 102 sick and wounded men were shifted by air in Iraq and 21 within the borders of Palestine. During the year Royal Air Force 'planes engaged on this work flew approximately 18,000 miles in the course of 76 separate journeys, 27 of which were ordinary routine flights. Special flights were undertaken whenever time, the site of the accident or the nature of the disease or injury were factors of major importance calling for swift and immediate removal to hospital. Altogether, in the nine years ended December 31, 1931, the British war 'planes transported in Iraq alone a total of 1,086 men, flying while engaged on this duty a distance of more than 90,000 miles.

Military aircraft in several different categories are employed for the carriage of sick and wounded. All troop-carrying aircraft—and these big aeroplanes are best suited to the work—are fitted for installation at need with stretchers and seats for up to six men. Smaller types of aeroplane, such as the general purpose biplanes which constitute perhaps the most important section of the Royal Air Force fleet overseas, are equipped to carry a stretcher in the upper part of the fuselage aft of the observer's cockpit and another in the under part of the fuselage forward. Similarly, many different types of civil aircraft manufactured in Great Britain, right down to the small aeroplane of 120 h.p., are so constructed that they may be easily converted for use as air ambulances.

" BABY " AEROPLANES.

On the 28th of December at Hanworth in England some remarkable new aeroplanes were tested. They are light-weight machines of a size and weight very much below that of any flying-machine hitherto made. The engine used is that of a motor-cycle. It is of six horsepower, of a famous and trustworthy make, and it is mounted on the top of the plane. During the tests there was no engine trouble of any sort.

These fascinating little machines are easy to handle—so easy that a novice becomes quite expert in using them after two or three hours' practice. They look so easy to fly that confidence is created and, in reasonably fine weather, they have proved themselves capable of wonderful achievements. They are, in fact, the first really successful blending of the glider and the power aeroplane. With them flying will most probably become a popular and inexpensive amusement for, made in quantities, they should not cost more than £200 at most. High speeds have not been aimed at—rather, a high degree of safety and great simplicity were the goals of the designers. The way in which these little " baby " aeroplanes behaved during the tests surprised everyone, and it is realised, as a consequence, that they mark the beginning of a new era in flying. England, which has given the world the best aeroplanes, the best motor-cycles, and the best " baby " motorcars, has scored one more very great success with these new light aeroplanes.

CATALOGUE LIBRARY.

The Undermentioned catalogues relating to United Kingdom manufacturers have recently been received and may be consulted by " *bonâ fide* " firms or individuals at the Office of His Majesty's Senior Trade Commissioner in India, Fairlie House, Fairlie Place, Calcutta.

Names and Addresses.	*Description.*
Frank How & Co., Ltd., Trogon Wharf, Stratford, London, E. 15.	Lubricating Oils.
* British Boiler Cleaning & Enamelling Co., Glasgow	" Llangrhood " Rapid Scale Remover.

*The catalogue marked with an asterisk has also been received in the Office of His Majesty's Trade Commissioner, 3, Wittet Road, Ballard Estate, Bombay, where it may also be consulted by " *bonâ fide* " firms or individuals.

MGIPC—L—407HMTC—27-2-33—1,050.

H. M. TRADE COMMISSIONERS IN INDIA.

Calcutta—

Sir Thomas M. Ainscough, C.B.E.,
His Majesty's Senior Trade Commissioner in India and Ceylon.

Mr. R. B. Willmot,
His Majesty's Trade Commissioner at Calcutta.
Post Box No. 683, Fairlie House, Fairlie Place.
Telegraphic Address.—" Tradcom, Calcutta."
Telephone No.—" Calcutta 1042."

Bombay—

Mr. W. D. M. Clarke,
His Majesty's Trade Commissioner at Bombay.
Post Box No. 815, 3, Wittet Road, Ballard Estate.
Telegraphic Address.—" Tradcom, Bombay."
Telephone No.—" Bombay 23095."

Ceylon—

Imperial Trade Correspondent,
The Principal Collector of Customs, Colombo.

With Compliments.

MARCH . 1933

The
Commercial Bulletin

A Monthly Review of Official and other
announcements relating particularly
to British Export Trade

Issued by
HIS MAJESTY'S SENIOR TRADE COMMISSIONER
IN INDIA AND CEYLON.

FAIRLIE HOUSE,
FAIRLIE PLACE,
CALCUTTA.

CONTENTS.

PAGE.

GENERAL 1

FINANCE 3

CONTRACTS SECURED 4

IRON AND STEEL 7

MACHINE TOOLS 8

POTTERY AND GLASSWARE 9

TEXTILES 10

PAPER 14

AUTOMOBILES AND ALLIED TRADES 16

AVIATION 17

THE GROWTH OF THE BRITISH CLOCK INDUSTRY 21

THE BRITISH CHEMICAL INDUSTRY 24

CATALOGUE LIBRARY 29

TRADE ENQUIRIES 30

GENERAL.

The export of goods of United Kingdom manufacture fell in January, 1933, by £1,918,000 as compared with January, 1932, or 6·1 per cent. while imports were lower by £8.026,000 or 12·9 per cent.

Certain additional details of last year's trade which are now available demonstrate the growing proportion of Great Britain's trade with the Empire.

Imports.—The value of the merchandise imported from foreign countries into the United Kingdom in 1932 showed a decline in comparison with the previous year of no less than £159,700,000. In the face of this reduction the fact that the imports of goods from Empire countries increased, if only by £1,600,000, is noteworthy.

Actually the share of the import trade of the United Kingdom held by British countries rose from 28·7 per cent. to 35·4 per cent.

The following table shows the value of imports from a number of foreign countries sending their merchandise to Britain:—

	1931. £	*1932.* £
Russia	32,285,000	19,697,000
Denmark	46,695,000	40,556,000
Germany	64,162,000	30,410,000
Netherlands	35,198,000	22,000,000
Belgium	33,189,000	15,989,000
France	40,921,000	19,022,000
U.S.A.	104,009,000	83,671,000

The following British countries show notable increases in their exports to Great Britain:—

	1931. £	*1932.* £
Canada	32,840,000	43,145,000
South Africa	13,120,000	15,529,000
Sudan	977,000	2,835,000
Jamaica	2,414,000	2,961,000
British Guiana	577,000	1,093,000
Mauritius	1,683,000	2,160,000

Many other British countries show increases, and in the case of some of the Dominions and Colonies an apparent drop in value, due to the fall of commodity prices, actually represents an increase of trade in bulk.

Exports.—An examination of the exports discloses that in 1932 British countries purchased goods of United Kingdom manufacture to the value of £165,532,000, a decrease of just over £5 millions on the previous year's figure, while the trade with foreign countries at £199,605,000 was over £20 millions less than in 1931.

THE WORLD'S FIRST FUR EXCHANGE.

An addition to the exchanges of the City of London was made on the 22nd February when the Lord Mayor of London (Sir Percy Greenaway) opened the London Fur Exchange at Beaver Hall, Garlick Hill, London, E.C.

The exchange, the first of its kind in the world, is accommodated in the building of the Hudson's Bay Company in which it is stated furs to the value of between £12,000,000 and £13,000,000 are handled annually.

SOUTHAMPTON DOCKS EXTENSION.

The extension of the Southern Railway Company's Southampton Docks, now in course of construction will, when completed, comprise a new deep-water quay, about one and a half mile in length and a graving dock so large that it will be able to accommodate a vessel of 100,000 tons displacement. The graving dock is being built primarily to house the new 72,000 tons Cunard liner. The new quay, which will provide berths for eight monster vessels, will be equipped with passenger and cargo sheds and the necessary transporting appliances for the speedy handling of all types of traffic. Behind these sheds there will be 400 acres of land with both rail and road access, available for dock premises and other forms of industrial development.

The new extension includes 7,000 ft. of deep water quay wall, designed for an ultimate depth of water of 45 ft. at L.W. O.S.T. The construction of the wall is being carried out by Messrs. Sir Robert McAlpine & Sons (London), Ltd. Landwards of the quay wall and behind the usual railway lines and cranes are the passenger and cargo sheds, the first pair of which cover an area of 5¾ acres.

The completion of this great work will have a very large bearing upon the immediate development and future prosperity of the Port of Southampton and of the Southern Railway.

NEW HAND INSPECTION LAMP.

The Wenham Lighting Corporation, Limited, 184, Gray's Inn Road, London, W.C.1, have recently placed on the market a hand inspection lamp which has many novel features. The handle is made of tough rubber and at the end through which the cable enters a watertight seal is readily provided by means of a "Jubilee" clip of a type well-known in the motor trade. Cable with a cab-tyre sheath is recommended for use with the lamp. The inner end of the handle is shaped to form a sealing grip both for the well-glass and the lampholder. A substantial brass guard is provided for the well-glass, from ¼ inch by 12 gauge strip with all joints rivetted. A hook is formed on the guard for suspension purposes. A clamp-type fitting secures the guard to the moulded rubber base and makes the lamp watertight and vapour proof. The resilience of the rubber handle makes the lamp practically shockproof.

The lamp has been readily accepted for use in chemical works, breweries, diving operations, and on railways.

Another model in which the brass guard is replaced by one of insulating material will shortly be placed upon the market for use in electric power stations and other places where a lamp with a metal guard is not desirable. Further details, together with quotations, can be obtained from The Wenham Lighting Corporation, Limited.

FINANCE.

NEW COMPANIES.

Sudan Barrage.

To tender for the construction of a barrage proposed to be erected by the Egyptian Government at Gebel Aulia, Sudan, and, if accepted, to construct such works, is among the objects of a new private company registered as Sir Evan Jones Baronet and Abboud Pasha. The company has a capital of £100,000 in £1 shares. Registered office —11 Great George Street, S.W.1.

AMALGAMATIONS.

Spillers' Acquisition.

It is announced that Spillers Ltd., the well known flour millers have concluded a preliminary agreement (subject to ratification) with Stoate & Sons, Bristol, for the acquisition of that company. In the event of the agreement being confirmed it is the intention that the acquired business will be carried on as a separate company as at present, with the same personnel and under the same management.

Steel Merger.

An amalgamation has been arranged, to take effect from 1st March, of two Sheffield firms specialising in the production of hollow-drill steel, the Clay Wheels Rolling Mills Ltd. and C. P. Morrison.

Cyder Firms Merge.

Negotiations have been concluded between the two pioneers of the Devonshire cyder industry, by which H. Whiteaway & Company of Whimple, took over on 1st February the whole of the business now being carried on by Henley Sons Cyder Company of Newton Abbot and London.

Increases in Capital.

	£
The Romney Trading Company, Ltd., Publishers	50,000
Pan Britannica Industries, Ltd., General Merchants and Manufacturers	100,000
R. A. Lister & Company, Ltd., Locomotive, Agricultural Machinery and General Engineers	800,000
The Macintosh Cable Company, Ltd., Electrical Engineers	150,000
Weymann's Motor Bodies (1925) Ltd., Motor Body Manufacturers	76,900
Robert H. Lowe & Company, Ltd., Woollen Manufacturers	48,000

CONTRACTS SECURED.

Electrification of Alexandria Harbour.

The various contracts in connection with this work have been awarded as follows:—

	Value.
Switchgear and Transformers to Messrs. Crompton Parkinson, Ltd.	£4,200
Pumps, motors and control gear, etc., to The British Thomson-Houston Co. Ltd., and Messrs. W. H. Allen and Sons, Ltd.	£2.150

Five Ice-making Plants.

Messrs. Peter Brotherhood, Ltd., have obtained from the Egyptian Government a contract for 5 ice-making plants. The total value of the contracts is about £15/16,000, about one-third of which will be represented by buildings and other work to be carried out locally.

British Aircraft for Turkey.

Messrs. Vickers-Armstrongs have reached an agreement with the Turkish Ministry of National Defence which will result in aircraft to the value of £120,000 sterling being supplied by the United Kingdom firm.

Flying Boats.

The Turkish Government has signed a contract with the Super-marine Aviation Works (Vickers), Ltd., to supply six Supermarine Southampton flying boats of a total of about £100,000.

Contract for Supply of 4 "Yarrow" Boilers.

According to a Decree of December 21st, 1932, the Argentine Naval Department have been authorised to acquire four "Yarrow" type boilers and accessories in accordance with specifications of Messrs. Vickers-Armstrongs for installation in the Argentine gunboats "Rosario" and "Parana", at a cost of nearly £5,000.

Brazil—Training Ship.

Messrs. Vickers-Armstrongs, Barrow, announce that a cable has been received from Brazil in which it is stated that the firm have obtained a contract for the construction of a Brazilian training ship, complete with armaments. It is understood that the value of this contract is over £300,000.

New Cargo Vessels.

Orders for three cargo vessels have been secured by the Furness Shipbuilding Company of Haverton Hill-on-Tees. One is for a ship of 7,000 tons dead-weight carrying capacity to be built under Sir Joseph Isherwood's new system, while the other orders are for two ships, each of 9,000 tons dead-weight carrying capacity. They are to be supplied to the order of British owners and will be Diesel-engined craft designed for fast cargo services.

Contract for Safety Razors placed with Sheffield Firm.

The War Office have placed their 1933 contract for safety razors and blades for the British Army with Messrs. Thomas Ward & Sons, Ltd., of Sheffield, manufacturers of the "Wardonia" razor.

This is the first time since the safety razor was invented that a Sheffield firm has secured this order and is another indication of the manner in which business previously in the hands of foreign concerns is being captured by Sheffield firms, who are now manufacturing and selling over 200,000,000 safety razor blades annually.

Last year Messrs. Thomas Ward & Sons secured the contract for safety razors and blades for the Indian Army, and for three years in succession they have supplied the requirements of His Majesty's Office of Works and the Irish Free State Army in respect of these goods.

Train Order for Britain.

An important contract for the construction of a complete Diesel electric express train has been placed with Sir W. G. Armstrong, Whitworth & Co., (Engineers), Ltd.

The train, which has been ordered by the São Paulo Railway of Brazil, is believed to be the first complete oil-electric train ever to be built by one firm. It is to run at express timings between São Paulo, the capital of the State, and the harbour of Santos.

Order for Diesel Engines for Iraq Petroleum Co., Ltd.

It is announced that the Iraq Petroleum Co., Ltd., have placed with Messrs. Harland and Wolff, Ltd., an important contract for 15 Diesel Engines of 500 H.P., each, of the four-stroke, single acting airless injection type, for five of the Pumping Stations on the Iraq Pipe Line. It will be recalled that this Pipe Line is at present under construction to convey oil from the Company's oil-fields in Iraq across the desert to the Mediterranean ports of Haifa and Tripoli.

Messrs. Harland and Wolff, Ltd., are known throughout the world as builders of machinery of the highest class, and during the past twenty years they have had a very extensive experience in the design and manufacture of all sizes and types of Diesel Engines; it is interesting to note that this order has been secured in competition with all the first-class oil Engine Builders in the world.

The building of the Engines is being carried out at the Company's large Diesel Engine Works, Glasgow.

IRON AND STEEL.

According to a statement issued by the National Federation of Iron and Steel Manufacturers there were 62 furnaces in blast at the end of January, an increase of two since the beginning of the month.

The production of Pig Iron in January amounted to 286,600 tons compared with 284,500 tons in December, and 330,000 tons in January, 1932. The production includes 74,600 tons of Hematite, 126,000 tons of Basic, 76,800 tons of Foundry and 8,300 tons of Forge Pig Iron. The output of Steel Ingots and Castings amounted to 444,400 tons compared with 430,400 tons in December and 429,700 tons in January, 1932.

The following table shows the average monthly production of Pig Iron and Steel Ingots and Castings in 1913, 1920, 1930-1932, and the production in each month since January 1932:—

	Pig Iron.	Steel Ingots and Castings.
	Tons.	Tons.
1913—Monthly average	855,000	638,600
1920 " "	669,500	755,600
1930 " "	516,000	610,500
1931 " "	314,400	433,500
1932 " "	297,800	438,100
1932—January	330,000	429,700
February	323,600	480,600
March	335,600	462,800
April	316,900	433,300
May	315,300	416,900
June	311,400	459,300
July	292,600	438,400
August	259,400	361,500
September	260,400	430,300
October	275,600	439,800
November	267,700	473,800
December	284,500	430,400
1933—January	286,600	444,400

MACHINE TOOLS.

Portable Radial Planing Machine.

Greenwood & Batley Limited, Albion Works, Leeds, have recently constructed a portable radial planing machine for facing up to a maximum diameter of 10 feet. The machine comprises a central cast-steel column having a 2-ft. 5-inch diameter circular base, on which is mounted, in ball and roller bearings, an outer cast-iron sleeve having two radial arms, on which are carried the tool boxes, one on each arm. The base of the inner column has four equally-spaced bolts which provide an easy means for levelling the machine to suit cambered surfaces. The outer sleeve and radial arms are rotated around the central column, the drive being transmitted through a 4 b.h.p. motor mounted on one of the radial arms, through reduction gearing and a gear box, which provides three rates of rotation, 0·6, 1·2 and 1 8 r.p.m.

The drive is through steel worm and phosphor-bronze worm wheel to the vertical shaft, the worm being fitted with ball thrust washers and revolving in an oil bath. The tool boxes have a self-acting feed along the radial arms, this being obtained from a disc through pawl and ratchet motion. Hand traverse is also provided, and the tool slides have a vertical hand adjustment of 9 inches.

The driving motor is of the totally-enclosed typo, fitted with ball and roller bearings. The speed at full load is 1,000 r.p.m. The control panel, of the wall-mounting, ventilating-case type, is totally enclosed and includes an ammeter.

The approximate weight of the machine, complete with electrical equipment, is 44 cwt.

Greenwood & Batley Limited, Albion Works, Leeds, have purchased the goodwills, patterns and drawings of the following firms and are favourably placed for executing orders for the class of machinery formerly sold by these concerns:—

John Hands & Sons Ltd., Birmingham.

Hollings & Guest, Birmingham.

Snow & Co. Ltd. Stanley Street, Sheffield, are making extensions which will provide increased drawing office and stores accommodation. A recent improvement embodied in the range of table surface grinders is the arrangement of the control feed wheel on the top of the machine instead of at the back. Recent orders for these machines have been received from India. A motor and Texrope drive is now being embodied on the top of the vertical-spindle surface-grinding machines, instead of the motor and spiral bevel gear drive, as an alternative to the direct motor-driven grinding head type. Rotary-table surface-grinding machines on order include machines with 26-inch, 36-inch and 60-inch diameter tables, the latter machine being destined for India.

B.S.A. (Tools) Limited, Sparkbrook, Birmingham, are working every department on full time, whilst certain sections are on night work consequent on the improvement in the demand for machine tools. The machines in progress include a batch of No. 12 centreless grinders with a new type grinding wheel head incorporating a gear-driven pump for lubricating the spindle bearings. The B.S.A. 6 by 6-inch and 8 by 10-inch manufacturing lathes are strongly in evidence, as are also Potter & Johnston chucking machines and all sizes of B.S.A. screw automatics.

POTTERY AND GLASSWARE.

Quiet conditions have prevailed in the Pottery industry during the past few weeks, but it is anticipated that when annual stocktaking and sales are completed throughout the country some revival in demand will take place.

Information recently published in regard to unemployment in the industry indicated that on 19th December, 1932, 18,772 workers out of a total of 62,000 were either unemployed or temporarily stopped, being 30·27 per cent. compared with 25,396 (40·96 per cent.) for January, 1932; 24,057 (38·8 per cent.) for January, 1931; 12,306 (19·74 per cent.) for January, 1930; 12,622 (20·35 per cent.) for January, 1929, and 13,205 (21·29 per cent.) for January, 1928.

It is understood that the British Pottery Manufacturers Federation and the National Society of Pottery Workers have agreed that no change shall be made in the rates of payment for wages, etc., during the ensuing twelve months, thus tending towards a stabilisation of selling prices during that period.

Following are details of the total quantity and value of the exports of pottery of all classes (excluding bricks) for the first month of this year with comparative figures for the three preceding years:—

	Quantity cwts.	Value £
January, 1933	155,332	206,206
,, 1932	246,557	235,428
,, 1931	317,368	291,765
,, 1930	429,929	505,202

The following statement gives details for each section of the industry:—

Section.	Value of Exports. Jan 1933. £	Value of Exports. Jan 1932. £	Inc. or Dec. Inc. £	Inc. or Dec. Dec. £	Inc. or Dec. per cent Inc.	Inc. or Dec. per cent Dec
Tiles—all classes	13,256	20,586	—	7,330	—	35·6
Sanitary ware .	48 458	39 265	—	10,807	—	18·2
Chinaware .	13 464	11,040	2,424	—	22·0	—
Electrical porcelain .	5,404	8,056	—	2,652	—	32·9
General earthenware .	105,043	102,287	2,756	—	2·7	—
Stoneware	2,220	4,723	—	2,503	—	53·0
Refractory goods and clay products not elsewhere specified.	18,361	29,471	—	11,110	—	37·7
Total .	206,206	235,428	—	29,222	—	12·4

The markets principally concerned with the decrease of £29,222 in the value of exports are Irish Free State, South Africa, India, New Zealand, Canada and "other countries not separately shown". Small increases took place in the value of exports to the United States, Brazil and Australia.

Following are figures of the exports of glass and glassware during January, 1933, with comparative figures for the preceding three years:—

	£
January, 1933	97,957
,, 1932	115,374
,, 1931	137,876
,, 1930	185,567

The decrease of £17,417 compared with 1932 occurred principally in the sections producing plate and sheet glass and glass bottles and jars.

TEXTILES.

COTTON.

The raw cotton market has been dull, and fluctuations in prices have been of little or no account, though the general trend has been downwards. Spot prices for middling American at Liverpool remain between 4·90*d.* and 5*d.*, and occasional recoveries to anything above 5*d.* are not maintained. From America it is reported that the growers contemplate an increased acreage for the new crop, in spite of the proposals made at Washington for a 30 per cent. reduction.

In the Manchester market enquiry from India has been of fair extent, but much of it has not led to business; most orders have been for small lots for prompt delivery. Some contracts have been placed for white yarn dhooties for Calcutta, and mulls and jaconets have been sold to Madras, while Bombay has bought a few lots of dyed goods.

The only business for the Near East and Egypt has been in sporadic orders for bleaching cloths and tanjibs. Shanghai has bought some white shirtings, though Hong Kong is reported to be overstocked.

Switzerland and Scandinavia have taken a few fine cloths, and the home trade has been in plain cloths and a few fancies.

The yarn market has been decidedly dull, especially in American yarns.

In spite of the inactivity and uncertainty of the market exports of piece-goods in January were rather better than in December, and considerably better than in January last year, whilst yarns, although considerably lower than January, 1932, were not much below December. The figures are as follows:—

Cotton Yarns.	*January, 1933. 1,000 lbs.*	*December, 1932. 1,000 lbs.*	*January, 1932. 1,000 lbs.*
Grey, unbleached . .	9,176	10,135	14,947
Bleached and dyed .	1,471	1,607	1,469
Piece Goods.	*1,000 sq. yds.*	*1,000 sq. yds.*	*1,000 sq. yds.*
Grey	36,057	37,404	32,673
Bleached	68,825	67,953	60,679
Printed	31,576	34,504	28,427
Piece dyed	50,639	45,680	48,918
Yarn dyed	10,246	10,282	9,153
Total Piece Goods .	197,346	195,823	179,852

WOOL.

There were more woollen yarns and piece-goods exported in January than in the first month in 1932, but tops show a slight decline during the same period and there were also less worsted yarns and piece-goods exported.

A feature of the woollen yarn exports is that the increase is due entirely to the quantities sent to the group of markets classed under " Other Countries." Germany imported 50 per cent. fewer worsted yarns from the United Kingdom during January than she did in January last year and the Scandinavian countries show considerable declines. The total figures for January, 1932 and 1933, are as follows:—

	January, 1932.	*February, 1933.*
Wool tops (centals of 100 lbs.) .	34,309	32,730
Woollen (carded) yarns (lbs.) .	474,700	581,200
Worsted (combed) yarns (lbs.) .	2,879,200	2,255,500
Woollen tissues (sq. yds.) . .	5,402,600	5,487,600
Worsted tissues (sq. yds.) . .	3,068,600	2,896,600

Raw wool, tops and yarns.—Wool values appreciated 5 per cent. to 7½ per cent. at the first series this year of the London wool sales compared with December rates. There has not yet been a corresponding advance in the quotations for wool tops and yarns.

There have been some good enquiries for hosiery yarns, but actual business is difficult to fix up. Some fair weights of medium and low crossbred yarns have been sold and continental enquiries for special types have come to hand, but in many cases the offers are too low to be accepted. It is reported that there is good reason to believe that wool is going to be used more extensively in conjunction with artificial silk yarns. Many of these mixture cloths intended for the gown trade and for making dressing gowns are already on the market. Compared with the 100 per cent. artificial silk fabric, they are more durable, they do not crease so easily and are much warmer.

Piece Goods.—There was a heavy decline in the January exports from the United Kingdom of both woollen and worsted fabrics to Germany, The Netherlands, Belgium and Canada, compared with January, 1932, and also of woollens to China and worsteds to

Greece, while considerably more woollens and worsteds were exported to the United States of America, The Argentine, Brazil, Japan, South Africa, Australia, New Zealand, India and Turkey. Denmark increased her imports of woollens from the United Kingdom but took much less worsteds.

A steady trade continues to be done with the Dominions in flannels, though there was a heavy fall in the total exports of these cloths during January, compared with the corresponding month last year. One or two South American markets are sending orders for fancy worsteds and enquiries for serges from Egypt and the Near East generally are rather more numerous.

The export of heavy woollens from Dewsbury is very quiet; recent orders from the Far East have had disappointing results, only small orders materialising.

An improved demand is anticipated from the United States of America for Scotch tweeds, but at present the Scotch woollen manufacturers are running their looms on short time.

LINEN.

The rise of flax prices has been checked, and indeed for the moment they show some weakness. It is, however, impossible to foresee the future trend of prices as there is still no reliable information as to the amount of Russian flax still to be exported. Supplies in the Baltic Succession States are known to be very meagre.

The average yield of the flax crop in Northern Ireland in 1932 was well above the average; it is estimated that it amounted to 30·1 stones per acre compared with 29·7 stones in 1931 and 27·9 stones average in the decennial period 1922-1931. 6,093 acres were sown, yielding 1,145 tons of flax.

Flax prices in Northern Ireland, after weakening towards the end of January, recovered this month. The Northern Ireland Ministry of Agriculture average price for the week ended 11th February, 1933, was *8s. 3d.* per stone.

Spinners complain that business continues to be slack and unremunerative. The railway strike is a contributory cause of the prevailing quietness.

Weavers are also finding trade bad, and in certain cases transport difficult or impossible. The Trade and Navigation Returns of the United Kingdom for January tell a more cheerful story so far as linen piece-goods are concerned. The United States of America, Canada, Brazil, Denmark and the British West Indies all took more linen piece-goods in January, 1933, than in the corresponding periods in 1931 and 1932, while British India, Cuba and Egypt all took more than in January, 1932. Unfortunately exports in January of linen thread, made-up goods and other manufactures of linen were smaller in every case than in January, 1932.

The value of linen goods imported into the United Kingdom in January last was £22,302 as compared with £20,488 in January, 1932, and £46,484 in January, 1931.

The value of the exports of linen goods from the United Kingdom in January last was £434,383 as compared with £444,868 in January, 1932.

The quantities of linen piece-goods exported during January, 1931, 1932, and 1933, were respectively, 5,650,800 square yards, 5,865,000 square yards, and 6,222,500 square yards.

PAPER.

Reports indicate that the improved tone which latterly has been noticeable in the paper trade is well maintained. Many mills are quite busy and buying is proceeding more freely than for some time past—prices however are still below the level which sellers can regard as satisfactory.

The output of United Kingdom newsprint has risen substantially in recent years and is equal (after deducting exports) to two-thirds of the consumption. The home mills which are equipped on up-to-date lines, appear to be well occupied, and considerable extensions have taken place, while others are projected. It is for these reasons, among others, that the Import Duties Advisory Committee have declined to grant the application recently made to them to remove newsprint from the Free List of imports into the United Kingdom. The Committee however, have intimated that should conditions change, for instance, in the event of imports of foreign newsprint developing on a substantially larger scale than heretofore, the matter would call for reconsideration.

The United Kingdom imports of paper for 1932 show a decrease of nearly 20 per cent. in value as compared with 1931.

Exports on the other hand have improved. The following figures relate to the total exports of paper and cardboard from the United Kingdom during the last three years:—

	Cwts.	£
1932	3,869,628	6,509.193
1931	3,242,105	6.324,269
1930	4,256,588	8,468,315

The 1932 figures although better than those of the previous year are still below those of 1930. A marked improvement however occurred during the later months of the year and the figures for the month of December in particular suggest that export trade is definitely on the upgrade.

The increase in the export figures is mainly accounted for by an expansion of the business done in printing paper, as indicated by the following figures: —

	1932.		*1931.*	
	Cwts.	£	*Cwts.*	£
Total exports of which to—	2,585,445	2,431,172	2,035,328	2,235,057
Australia .	1,539,901	1,199,163	1,084,018	932,035
New Zealand .	229,997	205,410	201,515	193,982
B. South Africa.	193,291	175,957	103,515	157,984

Writing paper in large sheets also shows an increase so far as quantity is concerned, but the total value is slightly lower than in 1931 due to the general decline in selling prices.

The export of playing cards for 1932 amounted to 289,023 dozen packs valued at £77,763 as against 164,857 dozen packs to the value of £58,553 during 1931.

Following is a detailed table showing exports for 1932 with comparative figures for the year 1931:—

Paper	*1932.* £	*1931.* £	*Inc.* £	*Dec.* £	*Inc.* %	*Dec.* %
Printing	2,431,172	2,235,057	196,115	—	0·8	—
Writing	444,920	467,160	—	22,240	—	5
Packing and wrapping .	249,544	290,137	—	40,593	—	16
Tissue . . .	141,808	139,743	2,065	—	0·2	—
Coated papers . . .	821,322	824,178	—	2,856	—	0·3
Stationery	1,066,606	1,225,309	—	158,703	—	1·5
Paper bags	105,240	108,739	—	3,499	—	3·3
Boxes and cartons . .	256,499	201,467	55,032	—	27	—
Millboard, strawboard, leather-board, etc., cardboard, wall-boards and paste-board .	250,624	240,369	10,255	—	4·3	—
Playing cards	77,763	58,553	19,210	—	32·8	—
Other sorts . . .	663,695	533,557	130,138	—	24·4	—
Total of all kinds .	£6,509,193	6,324,269	184,924	—	2·9	—

AUTOMOBILES AND ALLIED TRADES.

PRIDE OF ACHIEVEMENT.

Whatever may be the verdict of history in regard to the year 1932, the United Kingdom Motor Industry may look upon it as a period when, despite the general economic difficulties it demonstrated how a virile and courageous policy placed that industry in a position of increased importance in the markets of the Empire.

The real advance which the Industry secured during the year is revealed in the official returns of Export over that period, but behind the figures lies the real significance in that the improvement has been accomplished on a falling market.

The progress that has been made has not been alone restricted to Empire markets. On the continent, and in markets that were formerly virtually closed to the United Kingdom Motor Manufacturer, the British Motor Vehicle has secured an entry and is gaining for itself increased interest.

At home the United Kingdom manufacturer has still further consolidated and extended his grip on the market. According to a return issued by the Minister of Transport 19,701 new motor vehicles were registered for the first time in December, 1932 as compared with 16,763 in December, 1931. When it is recalled that over the twelve months imports fell by £250,000 it will be seen that an increasing percentage of the home market is falling to the domestic manufacturer.

United Kingdom motor exports increased by £700,000 and over 27,000 cars were exported as against 17,000 in 1931. Car chassis exports increased two-and-a-half times, and commercial vehicle chassis exports were nearly doubled.

The opening month of 1933 has shown the advance continued. During January the gross exports of Cars, Commercial Vehicles and Chassis exceeded imports by 6,067 (value £653,671) as compared with an increase in January, 1931 of 2,671 (value £424,942). One car manufacturer recently reported an increase of 80 per cent. in the export of his vehicles.

As conditions improve there is room for little doubt that the Industry will secure an increasing share of the World's Markets and United Kingdom Manufacturers are facing the future with confidence and determination to leave no stone unturned to place their Industry in a position of pre-eminence.

AVIATION.

ALL CHIEF FLYING RECORDS NOW BRITISH.

"Higher, faster and farther"—the phrase crystallizes the progress of aviation. To move through the air more and more swiftly, to climb to greater heights and to travel longer distances without alighting are the aims to which the efforts of designers of aeroplanes and aero engine are incessantly bent.

A moment's thought will prove that these aims are fundamental, implicit in the search for better and more "economic" airliners as in the building of record-breaking 'planes. The discovery how to construct a racing craft that is quicker than any previous type reacts upon the design of many different types of aircraft. Cruising speeds of military and civil machines may be expected to advance within a few years of the establishment of a new speed record; the designer has learned how to apply in the practical everyday aeroplane many of the features that gave speed to the racer. He enjoys the additional freedom in design brought by the production of a more efficient power unit, which itself owes much to the special motor in the racing aircraft.

A specially lightened aeroplane, powered with a new, supercharged motor, climbs to heights never previously reached in any power-driven flying machine. Engines of the same kind are available for installation in new types of civil and military aircraft able to operate with ease at heights greater than previously had been practical. Even the world's highest mountains cease to be an impassable barrier to air transport. A new world's record is set for distance flown on one fuel load in a straight line; success brings the immediate prospect of building aeroplanes which will carry a large useful load non-stop over at least half the distance covered by the record-breaker.

Thus, every advance in ultimate performance as expressed in the figures of world's records may be transmuted into gain in the design and construction of standard aircraft. Possession of the records is indisputable proof of performance; that Great Britain to-day holds each of the three most important records in flying means that her aircraft matériel, flown by pilots whose skill is unsurpassed anywhere in the world, has reached a point of progress sensibly in front of all of her competitors.

When Squadron Leader O. R. Gayford and Flight Lieutenant G. E. Nicholetts ascended from Cranwell aerodrome to fly to South Africa without alighting Great Britain already held two of the "supreme" flying records—407·5 m.p.h. by Flight Lieutenant G. H. Stainforth in his Vickers-Supermarine Rolls-Royce S6.B racing monoplane, 43,976 feet by Mr. Cyril Uwins in a Vickers "Vespa" biplane powered with a supercharged Bristol "Pegasus" unit. When they landed fifty-seven hours later at Walvis Bay, in the South West Africa Protectorate, they had secured the third outstanding record, that for distance, the "great circle" mileage of 5,341 easily surpassing the 5,012 miles of the two American pilots who set the previous record with a flight from New York to Constantinople.

No nation till now has ever held all of these three records simultaneously. They are the reward of undoubted brilliant design, superb craftsmanship and determined pursuance of plans in the face of great and frequently unexpected difficulties.

Once before Britain held the aeroplane non-stop record, though only for a few hours. In 1927 two Royal Air Force officers—Flight Lieutenants C. R. Carr and L. E. M. Gillman—made a forced "landing" in the Persian Gulf after flying in 34½ hours from Cranwell, more than 3,400 miles away. A little later Lindbergh landed in Paris at the conclusion of his spectacular journey from New York and wrested the honour by less than 200 miles from the British flyers. Since that first attempt, British Service pilots have made no fewer than four unsuccessful efforts to secure the record. The sixth attempt brought a change of luck.

The objective of the first four flights was India, and the fourth, accomplished by Squadron Leader Jones-Williams and Flight Lieutenant Jenkins in a Fairey monoplane similar to the craft flown by Gayford and Nicholetts, saw a new British record established with a flight of approximately 4,000 miles from Cranwell to Karachi. But in the meantime the world record had been pushed considerably beyond the 4,000 miles mark, and a new route was advisable if the record were to be comfortably broken. South Africa, and in most favourable circumstances perhaps Cape Town, became the objective. The first attempt ended in disaster. After travelling at an average speed of 120 miles an hour from Cranwell to Tunis, Jones-Williams and Jenkins struck in the darkness a hillside of the Atlas range. The aeroplane was wrecked and both flyers were killed; the most likely cause of the accident appears to have been an extraordinary defect in the altimeter, which is believed to have stuck at a height of about 5,000 feet, leaving the airmen under the impression that they were flying thousands of feet higher than the 1,000 feet or so at which they hit the ground.

The successful flight followed a long and weary period of waiting for suitable weather. Its last weeks were darkened by the sudden death from illness of Flight Lieutenant Bett, who had been standing by for many months to go with Gayford. Nicholetts was chosen to fill the gap.

In almost every detail the Fairey long range monoplane is exactly similar to its predecessor flown by Jones-Williams and Jenkins. In other words, its design is about five years old, a fact which enhances the achievement. Similarly the Napier "Lion" water-cooled 600 h.p. motor varies little from the engine installed in the earlier craft. Without reflecting adversely on the performance of aeroplane and engine one may fairly speculate on the capabilities of a long range craft built in accordance with the latest British ideas if a machine that is obsolescent can surpass all world's records by so large a margin. Probably an increased range of some 25 per cent. might be obtained from a newly designed aeroplane, a fact which is some measure of aerodynamical progress in the last five years.

When the aeroplane took off from Cranwell at the start of the great adventure it carried in the fuel tanks the enormous load of 1,150 gallons of spirit and weighed altogether no less than 8½ tons. The elaborate navigational equipment included the automatic control (or "robot pilot") short-wave radio transmitter, sextant and a very full range of speed, height and engine recording instruments. Food chosen for its compactness and high nutritive value and a hammock seat for the pilot off duty were supplied for the crew. The automatic control failed, for some reason which is at present unknown, when the airmen were entering on the second night of the flight, but up to that point it gave valuable help and considerably eased the task of pilotage.

Points of technical interest about the journey are the relatively high speed maintained by the big craft in weather conditions that were frequently adverse and difficult—93·3 m.p.h. from start to finish—the ease of take-off at Cranwell with the immense over-load of fuel, the superb navigation of the two officers which reduced deviation from the projected route to a minimum, and the faultless functioning of every mechanical detail (with the sole exception of the "robot" in the closing hours of the journey). First among the mechanical partners in the enterprise, apart from the aeroplane itself, must come the "Lion" engine which, in Squadron Leader Gayford's own words, "ran faultlessly for the 57 hours 25 minutes we were in the air, and we did not experience one qualm on its account throughout the whole flight." Only those who have gone on other flying adventures and who have listened for hours on end to the consoling steady roar of the power unit can appreciate to the full Squadron Leader Gayford's tribute.

Less than twenty-four hours after the long range flyers landed at Walvis Bay another British air triumph became part of history. Mr. J. A. Mollison descended at Port Natal, Brazil, after crossing the Atlantic Ocean from Africa in 17½ hours. Flying in the same "Puss Moth" monoplane which carried him alone across the North Atlantic last year, Mr. Mollison accomplished the first solo crossing of the South Atlantic from east to west, and the fastest flight yet made from Europe to South America. He stands alone as the only aviator to make two "lone" journeys over the ocean.

One important change was made in the aeroplane for this latest of Mollison's exploits. A 130 h.p. "Gipsy Major" engine was substituted for the 120 h.p. "Gipsy III" power unit fitted for the North Atlantic flight. In other respects the machine was exactly the same. Since his arrival in Rio de Janeiro Mollison has reported to the de Havilland Company that his engine is giving not the slightest trouble though he is running it at nearly maximum engine speed hour after hour. There can be no argument about the worth of flying matériel capable of such wonderful performance.

THE GROWTH OF THE BRITISH CLOCK INDUSTRY.

(*Reproduced from "The British Clock Manufacturer" of February, 1933.*)

Nothing more unobtrusive in the way of industrial enterprise can be imagined than the way the English Clock Manufacturing Industry has quietly come into being and forged ahead, attaining its present remarkable growth. Strictly, it is a revival of an old industry, native to this country for many generations until, a century or so ago, it began to decline under the aggressive spreading of foreign made clocks throughout the land. This is strange, because almost all the latter inventions by which more and more accurate timekeeping was ensured were the work of Englishmen, showing that the particular kind of gifts needed in the art of clockmaking existed in good form among them.

That these gifts should come to light again is a development everyone will welcome, and because far too little is known about the work of the last four or five years it is time the achievement should be brought to notice. The way the English clock manufacturer has re-entered his own market is hardly suspected by the public in general, who may vaguely associate the labels "English Movement," "Entire English Make" with the much discussed "Buy British" propaganda but has not yet realised that behind the label—and alone making it possible—are newly erected factories, great new organisations, many hundreds of work-people, and an efficient selling system.

By these means alone did it come about that a good, sound movement in a well finished case now appears in the windows of the retailers, marked as a home product. Posters did not do it, parliamentary speeches had no effect, appeals to "Buy British" were but futile as far as timepieces went until British clocks themselves appeared on the market. And that was the work of men quite unknown outside the circle of their trade, practical men with ideas and a relic in them of the old inventive clockmaker's spirit.

Between the new revival and the old industry there has been as the connecting link but two or three old established firms, making nothing but the best grade movements and, of course, in no quantity to satisfy the main needs of a large population, even supposing that their price could be met by the majority of people.

The new factories are still keeping up this tradition of quality but are able, by working on the best lines of modern efficiency methods, to broaden their production sufficiently to put a good British made clock within reach of every home. That is an actual fact, and to anyone privileged to go through one of these model factories the organisation can be seen at work which has made this possible.

In number the firms themselves may not exceed two dozen, but the same is true of other specialised manufacturing lines where the required skill and experience are not so common as to make it everyone's job. More important is the production of these firms and how far they meet, or can meet, the total national requirements.

What these latter are is a matter of estimate and will be discussed presently, but our immediate object is met if, after remembering how up to recently foreign clocks had it entirely their own way, or practically so, we ascertain that the British made clock, growing rapidly from its new beginning, now accounts for over a quarter already of the total clocks handled in one year in this country.

This is a great achievement for so few a number of years and has had to be gained in the face of the competent selling methods and trade connections built up in the United Kingdom by foreign firms who have had practically a clear field to themselves for the last 50 or 60 years.

1932 had Twice Output of 1931.

The proportion of over one-quarter mentioned only represents how the situation is at the moment, and when it is believed that this year's output in the British factories is likely to be *twice that of last year*, it will be seen that the great strides being made will quickly account for a far greater proportion of the national need for clocks. Given favourable conditions and the right response from the buying public capital and enterprise are ready to inaugurate an extension of the industry that will give a choice of patterns and a sufficiency of clocks *so that no clock need be bought that has not been made in its entirety in a British factory.*

At present there can be covered from British stock already a wide range of types of clocks, starting with the very moderately priced 30-hour lever and drum timepiece and including several grades of striking and chiming clocks.

Electric Synchronous Clocks.

Electric synchronous clocks are a specially well developed line with the British manufacturers and at this stage form a large part of the output. The extension of their principle to electric chiming and striking clocks is well under way.

1933 is undoubtedly going to see the establishment on a firm basis of synchronous electric clocks in this market and overseas, wherever there is alternating current, to such an extent, we believe, that the public may begin to realise that the next clock they buy *must* be a synchronous electric.

It is estimated by one authority that 500,000 will be sold in this country during the coming year. It would seem that this figure is too modest, if the business for 1932, which is actually the first complete year in which the synchronous clocks have been really pushed, be any criterion.

The following extract from an editorial, entitled "Better Times," was published in a recent issue of the London *Evening News* and it can be regarded as most significant.

> "Tariffs have given a remarkable impetus to the clock manufacturing industry, and imports of clocks have fallen 1,000,000 so far, in comparison with the figures of 1931. In the manufacture of synchronous electric clocks, in which the Continent had not obtained any hold, *we may have a new industry that is in a very healthy state.*"

The great progress in British clockmaking which this suggests is said by one of the largest makers to be due to the success of the new synchronous electric clocks. Wherever electricity is supplied under the new Grid System, and in many other areas, these clocks can be plugged in to the mains, and will record Greenwich time within a second or two for years on end. These clocks look very much like any others from the outside, yet they have no pendulum, escapement or springs, and no one has to wind them up or regulate them.

Thousands a month are being turned out by one maker alone, a firm famous for its motor car and aero instruments and well equipped to give this extra employment, and export figures are cheerful. It looks as though we may find before very long that the ordinary clock is becoming a curiosity instead of a commonplace and that householders and business folk will all "plug in to Greenwich time" as a matter of course.

Alarm clocks, in constant demand, are being taken up in manufacture, already 2,500 a week are being made, and as pendulum clocks and other remaining types become covered by the British made article our requirements need less and less to be met from abroad. The alarm clock forms a big market, and an output up to one million a year is promised by one firm alone.

THE BRITISH CHEMICAL INDUSTRY.

(By Allen J. Holden, B.Sc. (London), A.I.C., Assistant Secretary, Association of British Chemical Manufacturers.)

Most people realise vaguely that chemicals enter into many things of everyday use, that dyestuffs colour the clothes they wear and sometimes the food they eat, but the extent to which the chemical industry is a basic industry (without products of which practically every other industry, including agriculture, would come to a standstill), would have been forcibly brought home to the visitor to the Chemical Section at the British Industries Fair at Olympia last month.

Great Britain fully realises the importance of her chemical industry, as is indicated by the fact that the Chemical Section at the Fair is always much larger and more comprehensive in its scope than the corresponding sections at any of the regular continental exhibitions, and the best way to learn what United Kingdom chemical manufacturers are doing and what are the latest products available, is to visit the Chemical Section at the British Industries Fair.

The Section was organised in conjunction with the Association of British Chemical Manufacturers, the premier trade organisation for the chemical industry. The Association, the address of which is 166, Piccadilly, London, W. 1, is always ready to provide information in regard to the supply of chemicals and its main directory, printed in six languages, *viz.*, English, French, German, Italian, Spanish and Portuguese, and covering the products of all its members, is the most authoritative publication in existence as regards actual *manufacturers* of chemicals. Copies of the 1933 edition which has recently been issued will be sent free of charge to *bonâ fide* buyers of chemicals in overseas countries. The Association publishes a second directory devoted entirely to fine chemicals which contains a list of over 3,000 different products with the names of manufacturers in this country. An examination of the new issue published especially for the Fair and obtainable gratis on demand affords striking evidence of the progress of the United Kingdom fine chemical industry. Fine chemicals, are of vital importance to every other industry without exception, because even if they are not used directly in manufacture, they are essential for analytical control; on them, the health and well-being of the community also depend. The firms exhibiting at the Fair comprised the leading chemical manufacturers of the United Kingdom and all of them were *bonâ fide* chemical manufacturers with works in Great Britain. The products shown covered all branches of the industry including heavy chemicals, fertilisers, explosives, coal tar derivatives, fine chemicals of all kinds, such as medicinal, pharmaceutical, photographic, perfumery, analytical and research chemicals, solvents and plasticisers and dyestuffs.

The following brief description of the exhibits. will show that United Kingdom chemical manufacturers not only excel in the standard basic products but are well abreast of the latest discoveries.

Heavy chemicals and fertilisers.

The products of the British heavy chemical industry have for long held a deserved reputation for quality and are to be found in all the markets of the world. They are essential raw materials for numerous industries, such as soap, glass, paper, artificial silk, wire, steel and galvanised products, and these industries are now able to obtain the products they require in forms which are specially prepared to suit their own particular purpose. New products recently introduced in this class include a new form of granular soda ash of particular interest to the glass industry and other users needing a dense sodium carbonate which is also free flowing. Another form of soda ash recently introduced is the mono-hydrate, in the form of spherical crystals, which is one of the purest commercial forms of alkali known. It is particularly suitable for use in the preparation of pharmaceutical and photographic chemicals, and can be dyed and perfumed to give an attractive form of bath salts. United Kingdom superphosphate and nitrogen fertilisers are world famous, but less well known are the large scale trials under practical conditions designed to discover the optimum conditions for dressings, cutting and cropping.

Coal tar products.

The products recovered from coal tar include motor fuel and disinfectants as well as the raw materials which form the basis for the dyestuffs, explosives, fine chemicals, plastics and insecticide industries. These products are fairly well-known, but it is of interest to mention that the old-fashioned naphthalene moth-ball is finding a new purpose in connection with fumigation for horticultural purposes, whilst a new ant repellant oil has been developed to combat the mealy-bug on coffee plantations.

Medicinal and pharmaceutical preparations.

The progress of the fine chemical industry is specially striking and new products for medicinal and therapeutic use are well in the forefront, such as preparations for the treatment of tropical diseases including yaws, dysentery, malaria, sleeping sickness and leprosy. An important new development in the last year or two to which attention should be drawn may be described as " Empire Bromides ". The development of the salt resources of the Dead Sea has placed a supply of Empire Bromine at the disposal of the United Kingdom manufacturer who, for many years had been placed in a difficult competitive position owing to the monopoly of bromine held by Germany. As a consequence bromides are now being manufactured in the United Kingdom equal in all respects to the foreign product.

Kurchi bark has long been used by the natives in the Congo district as a treatment for dysentery, and extracts suitable for hypodermic injection and oral administration are now available. Phenacetin is now being made in Great Britain and United Kingdom insulin is recognised all over the world as the best product for the treatment of diabetes.

Analytical and research chemicals.

New analytical reagents making for better analytical control (by enabling the rapid detection of minute quantities of impurity) were a feature on certain Stands. The developments of this side of the industry are such that the laboratory and analytical chemicals produced by United Kingdom manufacturers are fully equal and in many cases superior to those for which at one time it was considered essential to go abroad. There is no longer any excuse, either on the score of variety, quality or price for users to go elsewhere than Great Britain. Mention may be made of a new reagent for the precipitation and estimation of potassium as a useful alternative to the classical but expensive patinic chloride. Other new reagents are available for the detection or estimation of small amounts of magnesium, tin and calcium, and for the separation of caesium from relatively large quantities of alkalies or alkaline earth metals.

Perfumery chemicals and essential oils.

Constant research is in progress to discover and put on the market new synthetic perfumery chemicals and isolates from essential oils. Special attention might be drawn to musk ambrette, which now completes the series of musk xylol, musk ambrette and musk ketone. Musk civette has only just been discovered, and is now undergoing trials, but it is expected to prove of great value to the toilet soap maker and perfumer. United Kingdom manufacturers are capable of supplying a complete range of perfume bases and fixatives for use in the innumerable products demanded by the modern woman for her beauty treatment, including scents, soap, bath salts, creams, brilliantines, lotions and cosmetics. There was a remarkable number of products available for use as flavouring essences and preservatives for mineral waters, confectionery, baking, jams, sauces, etc. United Kingdom manufacturers are able to supply flavours, essences, colouring matters and preservatives, guaranteed to conform to the Public Health and Food Regulations in force in any country in the world.

Dyestuffs and allied industries.

The progress of the United Kingdom dyestuffs industry has been truly remarkable, not only in the case of dyes for clothing and fabrics, but for such unexpected uses as soap, buttons, bath salts, leather and paper bags. The number of dyes now available has increased by leaps and bounds and one firm alone introduced some 200 new dyes and related products during 1932. Whereas before the war 80 per cent. of the dyestuffs required by Great Britain had to be obtained from abroad, the industry now supplies 90 per cent. by weight of the country's industrial requirements and the fact that the export trade is increasing in spite of the intense competition in foreign markets shows that the products compare favourably in variety and price with those of other countries. The dyestuffs industry is an outstanding example of the successful application of scientific research and method to manufacture. United Kingdom chemists are well in the forefront of the advances made, since of the five outstanding achievements of dyestuffs research since the war, three stand to the credit of United Kingdom chemists, including Caledon Jade Green, which marked the beginning of a new era in fadeless vat dyestuffs. An innovation of interest is the introduction of new fast and fadeless bookbindings.

Solvents and Plasticisers.

The use of special solvents and plasticisers is continually extending in the gum, oil, lacquer and varnish trades, but particularly in connection with cellulose lacquers for spraying motor bodies, etc. Even the perfumery, soap, laundry and dry-cleaning trades are interested in these products, which are really only in their infancy. Special products to give any desired speed of drying or degree of flexibility can be developed to suit particular needs, and each year has seen new additions by United Kingdom manufacturers to the range available.

Miscellaneous.

Space forbids any but a brief mention of numerous other types of chemicals such as photographic chemicals for the process engraver, the radiologist, and the plan producer, microscope stains and dyes, in forms suitable for all branches of medical and other research, and special chemicals for electro-plating including chromium plating. In the field of photographic chemicals, a noteworthy new development which was given a special display on the stand of the Association of British Chemical Manufacturers was hydroquinone. This chemical, which is the basis of many developers, has within the past few months been made for the first time in the United Kingdom. Special mention might be made of the rapidly growing industry in connection with moulded articles made from synthetic resins of the bakelite type, both for industrial and domestic uses, of which numerous artistic and useful examples were on show. A new plastic with special properties in the form of benzyl cellulose is a testimony to the progressiveness of the United Kingdom chemical industry. In brief, the United Kingdom chemical industry is utilising the new discoveries of science to the full and with the result that the scientific curiosity of yesterday is becoming the industrial product of to-day.

CATALOGUE LIBRARY.

The undermentioned catalogues relating to United Kingdom Manufacturers have recently been received and may be consulted by *bona fide* firms or individuals at the Office of His Majesty's Senior Trade Commissioner in India, Fairlie House, Fairlie Place, Calcutta.

Names and Addresses.	*Description.*
E. J. Riley Ltd., Willow Mills, Dale Street, Accrington.	Indoor Games List 1932/33.
T. H. Stainton & Co., Ltd., 44-45, Sussex Place, South Kensington, London, S.W. 7.	Motor Car Repurchase scheme.
W. Canning & Co. Ltd., 133/137, Great Hampton Street, Birmingham.	Dynamos, Motor Generators, Plating Equipment; Polishing and Grinding Machinery and Materials; Lacquers.
Crossley Motors Ltd., Gorton, Manchester.	"Silver Crossley" Motor Cars.
G. Akrill & Co. Ltd., West Bromwich.	Rolls for Rolling Mills.

The catalogues marked with an asterisk have also been received in the office of His Majesty's Trade Commissioner, 3, Wittet Road, Ballard Estate, Bombay, where they may also be consulted by *bona fide* firms or individuals.

In addition, His Majesty's Trade Commissioner, Bombay, has recently received the undermentioned catalogues:

Names and Addresses.	*Description.*
Lawrence & Mayo Ltd., 19, New Oxford Street, London.	Optical Goods.
Minimax Ltd., Feltham, Middlesex.	Fire Extinguishers, Engines, Escapes, Fittings, Hose, Buckets, etc.

TRADE ENQUIRIES.

The names of the United Kingdom firms referred to in the enquiries mentioned below will be furnished to reputable firms on application to His Majesty's Senior Trade Commissioner, Post Box No. 683, Fairlie House, Fairlie Place, Calcutta.

No. 290-33.

A United Kingdom merchant firm handling tin plates, galvanised and black sheets, and iron and steel, generally, is desirous of appointing agents in the principal ports.

No. 319-33.

A United Kingdom manufacturer of Steel Wire, and Manila Rope for Mining, Shipping and Engineering purposes, is desirous of appointing Agents throughout India.

No. 322-33.

A United Kingdom firm holding the British Empire rights for an Automatic Cylinder Boring Machine, suitable for garages, is desirous of appointing agents to handle the sale of this machine.

No. 373-33.

A United Kingdom firm is desirous of appointing Agents, with organisations to cover the whole of India, for the sale of:—

(*a*) Fruit and flavouring essences for Aerated Water and confectionery,

(*b*) Perfume bases for soaps, perfumes, brilliantines, etc.

No. 400-33.

A Manchester gentleman who has had long technical experience in the production of cotton yarns and piecegoods in his own mills, and has also conducted business as a general shipper and exporter of cotton piecegoods, yarns, etc., for a number of years, to the East, etc., is now commencing business as purchasing agent for overseas firms. He is therefore anxious to communicate with concerns abroad who are interested in the importation of yarns and textile fabrics from the United Kingdom and are open to appoint new or additional buying agents, on a commission basis, in the United Kingdom,

H. M. TRADE COMMISSIONERS IN INDIA.

Calcutta—

Sir Thomas M. Ainscough, C.B.E.,

His Majesty's Senior Trade Commissioner in India and Ceylon.

Mr. R. B. Willmot,

His Majesty's Trade Commissioner at Calcutta.

Post Box No. 683, Fairlie House, Fairlie Place.

Telegraphic Address.—" Tradcom, Calcutta."

Telephone No.—" Calcutta 1042."

Bombay—

Mr. W. D. M. Clarke,

His Majesty's Trade Commissioner at Bombay.

Post Box No. 815, 3, Wittet Road, Ballard Estate.

Telegraphic Address.—" Tradcom, Bombay."

Telephone No.—" Bombay 23095."

Ceylon—

Imperial Trade Correspondent,

The Principal Collector of Customs, Colombo.

With Compliments.

APRIL 1933

The
Commercial Bulletin

A Monthly Review of Official and other
announcements relating particularly
to British Export Trade

Issued by
HIS MAJESTY'S SENIOR TRADE COMMISSIONER
IN INDIA AND CEYLON.

FAIRLIE HOUSE,
FAIRLIE PLACE,
CALCUTTA.

CONTENTS.

PAGE.

H. M. TRADE COMMISSIONER SERVICE 1
GENERAL 1
FINANCE 3
THE 1933 BRITISH INDUSTRIES FAIR 4
CONTRACTS SECURED 12
IRON AND STEEL 14
SHIPBUILDING 15
POTTERY AND GLASSWARE 16
TEXTILES 17
PAPER 21
AUTOMOBILE AND ALLIED TRADES 22
AVIATION 25
WIRELESS TELEGRAPHY 27
CATALOGUE LIBRARY 30
TRADE ENQUIRIES 32

H. M. TRADE COMMISSIONER SERVICE.

Sir Thomas M. Ainscough, C.B.E., returned to India on 30th March, and re-assumed charge as His Majesty's Senior Trade Commissioner in India.

Mr. R. B. Willmot, His Majesty's Trade Commissioner at Calcutta, is due to leave Bombay on 3rd May on leave out of India.

GENERAL.

In comparison with February 1932, imports during February 1933 declined by £21,098,653 or 30 per cent.; exports declined by £2,083,865 or 6·9 per cent.; and re-exports by £969,341 or 17·7 per cent. Whilst these figures do not show any definite improvement, considering the small number of working days, trade during February has held its own tolerably well.

As a consequence of the marked reduction in imports the adverse trade balance for the month of £16,600,000 shows a considerable reduction as compared with the monthly average adverse balance of £24,000,000 last year.

Of the reduction of £21,000,000 in imports, the chief decline was in respect of imported manufactured goods which were reduced by £9½ millions, *i.e.*, a reduction of over 50 per cent., as compared with a year ago. Imports of food, drink and tobacco declined by nearly £8½ millions and the remainder of the reduction was due to a fall in the importation of raw materials. As regards the fall in imported manufactured goods the decline in the case of iron and steel was 75 per cent. and in that of machinery and chemicals 60 per cent. On the other hand, although the value of raw materials as a whole decreased, a notable exception was cotton with a gain of 15·5 and 16·8 per cent., respectively, in quantity and value. The quantity of imports of raw wool and rubber also show an increase as compared with a year ago, although the value of these commodities shows a reduction in each case.

A NEW TYPE OF BRITISH DIESEL ENGINE FOR DUTCH CARGO LINERS.

Crossley diesel engines have again been chosen for important auxiliary work on cargo-carrying vessels, but an order received by the Openshaw works recently is more significant than an ordinary order for auxiliary drive units because the shipowners, who are motor-ship users of wide experience, have chosen this United Kingdom diesel engine from among a wide selection of similar types offered by other manufacturers in Europe. This augurs well for the future of the United Kingdom diesel industry.

Quite recently it was possible to record that a prominent Dutch manufacturer of crankcase compression engines had taken out a licence for a United Kingdom engine for river craft. Now comes the announcement that a well-known Dutch shipping company has bought these auxiliary diesels of United Kingdom manufacture for three important steam to diesel conversions. The owners are the Netherland Steamship Co. and the ships in question are the "Manoeran", "Madoera" and "Mapia". The engine is a 2-cycle single-acting trunk piston type, with separate scavenge air pump and forced lubrication. The engine is connected to a 65 kw. generator set for lighting, supplying current for the motors operating the fresh water pump, the piston cooling pump and the fuel oil separators. These ships were originally built as steamers and are now being converted into motorships by the removal of the old main steam propulsion gear and the substitution of two sets of diesel engines geared to a single propeller shaft. The auxiliaries are part electric; as indicated above, and part steam.

A great deal of interest is bound to be focussed upon these vessels because of the novel arrangement for their propulsion and the order, without exaggeration, may be said unquestionably to be one of the most important to be received by a United Kingdom auxiliary engine manufacturer within the last year or so. It is understood that this particular engine has been developed in sizes which are suitable for direct propulsion purposes.

PACKING FOR TIN PLATES.

Messrs. Thames Board Mills, Ltd., have recently announced that, after lengthy experiments, they have evolved a suitable fibreboard case to carry tinplates which it is asserted has advantages over the wooden cases hitherto in use A number of shipments have already been made with complete success.

Among the advantages claimed for the fibreboard packing is complete immunity from rain, dust, grit, etc., which frequently enters through the gaps in the lids of wooden boxes and causes damage to the contents. In addition the new packing is not more than half the weight of wood, thus reducing the cost of freight.

The material of which the wrapper is made is registered under the name of "Fiberite" and is entirely of United Kingdom manufacture.

The manufacture of "Fiberite" wrappers is in the hands of The South Wales Patent Metal Box Co., Ltd., Hafod Isha Works, Swansea, to whom all requests for further information should be addressed.

VICKERS-ARMSTRONG'S NEW ENTERPRISE.

A new step in the United Kingdom canning industry has been taken by Messrs. Vickers-Armstrong's, Ltd., of Elswick, who have begun the manufacture under arrangement with the E. W. Bliss Co. of Brooklyn, N.Y., of Bliss presses, hitherto made only in America. The machines will be manufactured at the Crayford works of Vickers-Armstrong's.

FINANCE.

The *Britannia Iron and Steel Works, Ltd.*, has been registered as a private company, with a capital of £200,000 in £1 shares to carry on business as manufacturers and dealers in forgings, malleable iron tubes and fittings, coils, valves, accessories for electric railway and transmission systems, etc. The directors are:—Ernst Homberger, Edward Le Bas, Henry S. Loebl, Julius Beuhrer and Robert Osborne. Registered office: Britannia Iron Works, Kempston Road, Bedford.

British Pepper and Spice Company, Ltd., has been registered as a public company, with a capital of £160,000 in £1 shares, to acquire the shares of Drysdale Dennison Co. and White Palmer & Co. (1931) and to carry on the business of manufacturers of and dealers in pepper, spices, provision merchants, etc. The directors are:—Benjamin E. Figgis, James S. Gray and Desmond A. Smith. Registered office:—31, Queen Victoria Street, London, E.C. 4.

Bravisco, Ltd., Capital £125,000. This concern has been formed as a private company to acquire the exclusive rights to the Ruth-Aldo viscose process for the manufacture of rayon in Great Britain, Northern Ireland

and the Irish Free State and to adopt an agreement with Ruth-Aldo Company, New York. The first directors are:—Sir Sydney M. Skinner, Diogenes M. Balsam, Ernest H. Gardner, Hugo Koehler, Lionel C. Patterson and Lawrence A. Whaley.

White Drummond & Co. The name of J. G. White & Co. has been changed to White Drummond & Co. The occasion of the change in style is the passing of the controlling interest into the hands of a British group. The original company was formed in 1900 to acquire the entire business outside North America of J. G. White & Co., Inc., of New York, electrical engineers, contractors, financiers and investment bankers.

Increases in Capital.

	£
Carreras, Ltd., Cigarette Manufacturers .	1,000,000
Lilley & Skinner, Ltd., Boot & Shoe Manufacturers	275,000
F. H. Porter, Ltd., Boiler & Steam Pipe Coverers	40,000
Christy Bros. & Co., Ltd., Electric Light Engineers	100,000
Edmund Nuttall Sons & Co., Ltd., Tramway Contractors	300,000

THE 1933 BRITISH INDUSTRIES FAIR.

Satisfactory Results.

Organisers and exhibitors alike expressed satisfaction with the results of the 1933 British Industries Fair at Olympia, the White City and Birmingham.

All three sections—the lighter industries at Olympia, textiles and furniture at the White City and the heavy industries at Birmingham were larger and more varied in 1933 than in any previous year.

Reliable estimates of the value of orders actually booked at the Fair are impossible to make, inasmuch as many exhibitors prefer not to publish details of business done.

Exhibitors in most sections of the Fair pointed out, however, that the success or otherwise of the Fair is not to be judged merely by the value of orders actually booked at the Fair itself. On the contrary, a number of exhibitors emphasize that they do not expect to book orders at the Fair itself. What they do expect to do is to enlist interest in their products, meet prospective new customers and obtain inquiries which they can follow up after the Fair is closed.

There was general agreement among exhibitors that in all these respects the 1933 Fair had fully come up to their expectations, and in some instances had exceeded them.

This view was endorsed by Mr. Stanley Baldwin, M.P., after touring the Birmingham section of the Fair on the closing day--previously Mr. Baldwin had visited the London section. In a luncheon address at Birmingham on March 3rd, Mr. Baldwin said: "The British Industries Fair has gone on year after year from strength to strength. At the present time there are no Fairs in the world more attractive, more varied, and that do more good, than these great Fairs which take place annually in London and Birmingham."

Lieutenant-Colonel D. J. Colville, M.P., Secretary of the Department of Overseas Trade, summed up the official view of the results achieved in the following statement, which was issued from London on the closing day:—

> "There has been a distinctly happy atmosphere in all sections of the Fair at Olympia, the White City, and Birmingham. Oversea inquiries have been numerous and many useful orders have been placed, although world conditions have tended to make these not so widespread as at the 1932 Fair. In a great measure these good results are due to the gracious interest of the Royal Family and the whole-hearted support of the Press. There is no doubt that once again the Fair has achieved its object as a great marketing centre for British goods."

The following official statement was issued on the closing day by Mr. Peter F. Bennett, President of the Birmingham Chamber of Commerce, which organises the Birmingham section:—

> "The Fair of 1933 has been most successful. The reports received from many exhibitors indicate that much business was done.
>
> "The influence of the Fair goes far beyond the immediate benefits which it affords to British home and export trade. For business propaganda and for establishing relationship the Fair is of inestimable value.

"Some exhibitors reported that transactions were completed as a result of negotiations opened at previous Fairs."

Overseas Visitors.

Exhibitors stated that although foreign buyers seemed to be somewhat fewer in 1933 than in 1932 they were "more serious" and ordered more readily - an encouraging sign in view of the many obstacles to international trade.

In all representatives from some 78 overseas countries and territories visited the 1933 Fair. The visitors included organised delegations from the Argentine, France, Norway, Sweden, Denmark and Yugo-Slavia. Increased numbers of overseas buyers compared with 1932 came from Belgium, France, Canada, Australia, the Straits Settlements, China, Czechoslovakia, Finland, Lithuania, Latvia and Iceland.

Without exception, statements issued to the United Kingdom Press by all overseas visitors expressed the highest admiration for the exhibits shown and the arrangements made at the Fair. A number of overseas visitors stated that they had seen at the Fair many products which they did not even know were made in Great Britain.

The overseas visitors agreed too in emphasizing the fact that as a result of Great Britain's abandonment of the gold standard and the reduction of production costs, prices were very much lower than the visitors had expected them to be. Several spokesmen for overseas delegations urged that United Kingdom manufacturers should take steps to make their products and present competitive prices more widely known abroad.

Attendances.

Attendances during the Fair from February 20 to March 3 inclusive—at Olympia and the White City with corresponding figures for 1932 were:

	1932.	1933.
Overseas buyers . .	9,784	9,626
Home buyers	270,000	128,000

The total attendances at the Birmingham section in 1933 were 111,213, compared with 144,389 in 1932.

It should be noted that in 1933 for the first time buyers visiting the London section were charged 2*s*. for admission in previous years admission at London had been free.

Buyers were admitted to the Birmingham section without charge, but the public admission charge was increased to 2*s*.

The admission charges made in 1933 naturally tended to reduce the numbers of visitors to the Fair, but the charges met with the approval of a very large proportion of the exhibitors in view of the general desire to restrict attendances to trade buyers during the business hours of the day.

At the conclusion of the Fair the following summaries of reports received from various sections were issued:

OLYMPIA AND THE WHITE CITY.

Foodstuffs.—Business generally quiet.

Automatic Vending Machines.—Principal exhibitors are satisfied with overseas enquiries. Nothing outstanding.

Plastics.—Exhibitors are not disappointed as regards prospective business. No further report.

Chemicals.—Most exhibitors report business on a level with last Fair, but in no case higher. A number of enquiries from new Home and Overseas buyers.

Radio. General enquiries good. Many Scandinavian visitors seeking agencies. No special business to report with Home buyers. B.B. Corporation satisfied with results.

Leather and Leather Goods.—Business generally very quiet and in the aggregate not so good as last Fair. Foreign enquiries have been numerous but mainly for sample lines, orders being difficult to place owing to high tariffs.

Jewellery and Plate.—Exhibitors generally are well satisfied. Several report better business than last Fair. Many orders placed by Overseas buyers, and many thousands of pounds worth of orders have been promised. South African buyers placed order for 1½ million razor blades, and a London buyer for 10 million blades.

Fancy Goods. The majority of exhibitors report that business is only on a level with last Fair, or a trifle less. They are, however, satisfied with results. The number of new accounts opened (Home and Overseas) is gratifying. A few exhibitors report doing double the business that was done at the 1932 Fair. Danish buyers have been active, and orders have resulted from German, French, South American and Irish buyers. 50,000 cheap shaving mirrors and 10,000 hair brushes ordered by a Continental firm. Individual orders amounting to more than £500 were, however, not numerous.

Scientific Instruments.—Exhibitors satisfied on the whole. Nothing special to report.

Pottery and Glassware. A general feeling of quiet satisfaction among the exhibitors. Business the first week less than the same period last Fair, but greatly improved the second week. No details forthcoming of actual orders, but the bulk have been placed by buyers at home. Overseas business below the average.

Druggist Sundries.—Business on the average the same as last year. Overseas enquiries mainly from Scandinavia but no information as to actual business done.

Paper Printing Machinery.—The section is generally satisfied and orders have been equally as good as at the last Fair. Many exhibitors report a substantial increase in orders. Overseas enquiries have been encouraging. Some good business has been with buyers from Denmark, Holland, Switzerland and Belgium.

Furniture.—The general opinion expressed by leading exhibitors is one of satisfaction, and results on the whole are good; in many cases better than last Fair. Some exhibitors report new overseas connections. One firm has doubled last year's turnover. Quite a number of orders have been obtained from Dutch buyers.

Textiles.—The general reply in the Textile section is, "We have done remarkably well both with Home and Overseas markets". One exhibitor reports such business that his factory will have to be again extended and additional hands employed. Another firm has received so many orders that they wonder whether they can meet the demand. During the first two hours of the Fair one firm had taken £2,000 worth of orders. Many excellent orders have been placed.

BIRMINGHAM.

Hardware.—The general hardware group was the largest in the Fair, and was divided into two parts—(1) hardware, ironmongery, brassfoundry and hollow-ware; and (2) garden equipment, including portable buildings. The display was described by experts, officials and leading members of the hardware and ironmongers' associations, as the most comprehensive and representative ever seen in the United Kingdom, and there was general agreement that in most branches of the trade the British manufacturer can compete, quality for quality, with foreign competitors. The volume of trade inquiries was very large, and many exhibitors reported also that satisfactory business was done. There were many overseas buyers from the Continent, particularly from Sweden, Finland, Holland, Belgium and Denmark, and the Colonies were also fairly well represented. Some of these visitors placed sample orders, covering a wide range of products, and the hope is confidently entertained that in due course substantial business will result.

Cooking and Heating. The group relating to general heating and cooking equipment attracted general attention, and the reports received from the bureaux of the National Gas Industry and the Electrical Development Association were, in each instance, to the effect that the number of inquiries received was much larger than at last year's Fair. The trade organisations connected with those industries were all represented, and very large delegations attended. Agreement was expressed as to the great advances made during the past year in cooking and heating equipment. Many important exhibitors of grates for housing schemes, heaters and cookers and most modern types of heating systems express themselves satisfied with the actual amount of business done.

Gas Industry.—The leading makers of gas plant and equipment again had stands in the Fair and the opinion was expressed, both by British gas engineers and by experts from the Continent, that the display was the most complete ever seen in the United Kingdom. While interest was manifested in the products of all departments of the industry, special attention was this year attracted by the work of the Industrial Research Laboratories, particularly in relation to the heat treatment of metals by gaseous fuel. It is apparent that gas is destined to play a more important part in industrial operations in the United Kingdom. Demonstrations in the Fair suggested the far-reaching possibilities in the use of compressed coal gas as a motor fuel. The trade outlook in the gas industry – one of the most virile of the older industries is considered to be extremely satisfactory.

Metal Group. The display of iron and steel and non-ferrous metals (with the addition of pipes, tubes and wire) was superior to that at the Fair of 1932, which was described by Continental metallurgists as superior to that at Leipzig. There is no industry which has benefited so much from scientific research. Remarkable progress has been made recently in those departments relating to new alloys, which make for lightness in weight with great tensile strength. Almost equally important were the recent developments in tubular construction.

A fair amount of business was done, and many important inquiries were received from Sweden and Finland with regard to the new alloy products. Industrial oil furnaces were a more important feature than at any previous Fair, the many demonstrations serving to show that oil, like gas and electricity, has a well established place in metallurgical operations.

Transport.—Considerable attention was centred on the transport group, which related primarily to motor cycles and cycles, though on this occasion increased interest was given to this group by a display of motor cars and by stands upon which three-wheeled lorries and caravans were shown. The number of visitors and buyers at these stands daily was exceptionally large. The exhibitors reported that they will be occupied for a considerable time in following up the many inquiries received.

Quarry-to-Road Group.- The attendance of civil engineers and surveyors of local authorities, as well as men interested in the British quarrying industry, was much bigger than last year, this being due, doubtless, to the greatly extended quarry-to-road exhibit. The site outside the Exhibition Hall, devoted to actual demonstrations in mechanical equipment, as required in quarrying and modern road construction, was much enlarged. The inclement weather during the first week of the Fair was a severe handicap to operations by mechanical equipment but during the whole of the second week the operations were carried out on extensive lines. Manufacturers in this Department do not, of course, expect to take orders, but very effective propaganda work was done. It is probable that the area of the quarry-to-road section will be again enlarged A plea was made by leading members of the Institution of Civil Engineers and by Municipal and County Engineers to develop the section into a national road exhibition, with a National Conference to be held concurrently with the Fair.

Heavy Engineering.—The Engineering Group, as in previous years, attracted representatives from all the British Engineering societies and facilities were afforded by which "key-men" in important works could attend the Fair. A very large amount of machinery was shown in operation, revealing technical advances of a far-reaching character. Most of the visitors were primarily concerned in prosecuting business inquiries. Actual purchases were limited, as a rule, to the smaller types of machinery. A number of cases were reported, however, in which specifications were asked for regarding costly power plant.

Building and Decoration.—The building and allied industries sent important delegations to the Fair, and according to leading experts this group was in accord with the best traditions of the British building trade. There was increased evidence of mass production methods, and of specialisation on high grade products, and further advances were to be noted in labour-saving machinery. Whilst inquiries were satisfactory there was not much bulk buying in this section, a fact which is easily understood having regard to the economy restrictions imposed by local government authorities in respect of housing developments.

Electrical Group.—All aspects of the British electrical engineering industry were thoroughly well represented at the Fair. The story of the electrical industry has throughout been one of steady progress, and its development in recent years has, in consequence of the "Grid" system, been phenomenal. It has, in fact, been better placed than most industries during the present period of trade depression. The number of actual transactions in this group was fairly large.

In the domestic accessories branch particularly, purchases on a liberal basis were made. According to the reports from the Electrical Development Association the number of business inquiries was in excess of any previous Fair.

CONTRACTS SECURED.

South Africa: Railway Contract for £150,000.

It is announced that the South African Railways and Harbours Administration have recently placed contracts, with United Kingdom manufacturers, for about 17,000 tons of steel rails and fishplates required for 110 miles of track.

The orders for about 15,700 tons (96 lb. steel rails, with fishplates for 100 miles, have been allotted as follows:—Cargo Fleet Iron Company, Middlesbrough (30 miles): British (Guest-Keen-Baldwins) Iron and Steel Company, Port Talbot (30 miles); Dorman Long & Co., Middlesbrough (20 miles); and the Barrow Haematite Steel Company (20 miles).

The order for about 1,300 tons (10 miles, single track) 80 lb. steel rails, with fishplates, has been given to the Lancashire Steel Corporation, Manchester.

Orders for the accessories for both rails and sleepers have been awarded as follows:—

Fishbolts for both classes of rails:—Guest, Keen and Nettlefolds; bolts for sleepers for 80 lb. rails:- The North West Rivet, Bolt and Nut Factory, Airdrie, Scotland; bolts for sleepers for 60 lb. rails:—Guest, Keen & Nettlefolds; clips for both types of sleepers:—Tees Side Bridge & Engineering Works, Middlesbrough; 320,000 fishbolts for special fishplates:—Guest, Keen & Nettlefolds.

Orders for 130,000 pairs of special type of fishplates have been equally divided between David Colville & Sons, Ltd., Motherwell, and the Lancashire Steel Corporation, Manchester.

The total value of the orders secured by United Kingdom manufacturers is in excess of £150,000.

Cargo Vessel for the Bombay Steam Navigation Company.

Messrs. Harland & Wolff, Ltd., have received a repeat order for a twin-screw passenger and cargo vessel for The Bombay Steam Navigation Co., Ltd.

The new vessel will be about 200 feet long, and will have two sets of triple expansion engines with one double-ended boiler suitable for burning coal or oil. The vessel will be built to Lloyd's Classification, and conform with the requirements of the Indian Government.

This is the third vessel ordered by The Bombay Steam Navigation Co. from Harland & Wolff, Ltd.

Coal for Swedish Railways.

The Swedish State Railways have placed orders for 110,000 tons of coal, all in Great Britain.

All the Scandinavian countries are now importing more British coal and the increase in shipments to these markets is one of the few gratifying features of the export trade.

El Kossier Distilling Plant.

The contract for El Kossier Distilling Plant, Egypt, has been awarded to Messrs. Hick Hargreaves & Co., Ltd., and Messrs. Davey Paxman & Co. (Colchester), Ltd., through their Cairo representatives. The value of the contract is over £E.6000.

Order for Pumps for the Iraq Petroleum Company.

The Iraq Petroleum Company have placed with Messrs. Worthington-Simpson Limited, of London and Newark, the complete contract for pumps for the Iraq pipe line. The contract comprises forty five Horizontal Duplex Double Acting Outside Packed Plunger Pattern Oil Line Pumps fitted with forged fluid ends $6\frac{3}{4}''$ dia. × $24''$ stroke and having single reduction helical gears. All the moving parts are enclosed to protect the pumps from the ingress of sand. The pumps are to operate against 800 lbs. per sq. inch pressure and will transport oil through two pipelines totalling 1200 miles from East of the Tigris to Tripoli and Haifa on the Mediterranean Sea coast.

British Sugar Machinery for India.

The British Empire Sugar Machinery Manufacturers' Association state that one of their Members, the Mirrlees Watson Co., Ltd., has obtained contracts for five cane sugar factories which are to be erected in India for the next milling season.

The first of these factories is to be erected in Balrampur State, and is to be a duplicate of one supplied last year to Messrs. Begg Sutherland & Co., and erected at Chanpatia.

The second order is for the Mysore Government, and the factory is being built to deal with cane which will be grown under the extensive irrigation schemes being developed by the Mysore Government.

Two factories have been ordered through Messrs. Octavius Steel & Co., of London who have had extensive experience of the high quality of the machinery supplied by the Mirrlees Watson Co., Ltd., in the Lohat factory of The Darbhanga Sugar Co.

The fifth factory is for the Indian Sugar Works Ltd., and is to be erected at Chapra. This Factory will be generally a duplicate of four factories built by The Mirrlees Watson Co., Ltd., in India last year with a normal rating or 400 to 450 tons cane per day. Each of these four facteries is now grinding between 510 and 580 tons cane per day.

In addition to the five factories above mentioned, there were built for the 1932-33 Milling Season one factory at Nellikuppam, which is now successfully operating at full capacity; and a factory at Jhusi which has just commenced grinding.

The local agents of Messrs. Geo. Fletcher & Co., Ltd., Derby, report that they have secured the following contracts:—

One 450/600 ton Cane Crushing Factory producing Plantation White Sugar by the double sulphitation process from Messrs. L. H. Brothers, to be erected at Pilibhit alongside the existing 500 ton Plant.

One 400/600 Cane Crushing Factory producing Java White Sugar by the double carbonatation process from Messrs. The Jagatjit Sugar Mills Co., Ltd., to be erected at Phagwara, Punjab.

IRON AND STEEL.

At the end of February there were 63 blast furnaces working, or one more than at the beginning of the month. The production of pig iron in February amounted to 270,800 tons compared with 286,600 tons in January and 323,600 tons in February last year. The daily rate in February was about 5 per cent. higher than in January. Export trade in pig iron, however, is still very poor, the figures for February, 1933, being 5,673 tons compared with 10,600 tons for the year before. A substantial shipment was made from the Tees to Italy early in March and it is probable that the March returns will show an improvement.

The output of steel ingots and castings in February amounted to 482,700 tons compared with 444,400 tons in January and 480,600 tons in February, 1932. The increased steel output is, of course, largely due to the fact that the United Kingdom Customs Tariffs have virtually put a stop to the importation of foreign steel in a good many districts. The total imports of all iron and steel material in February was 77,959 tons as compared with 249,019 tons for the corresponding month of 1932.

The total exports of iron and steel material in February amounted to 135,619 tons, which is slightly lower than the total for February, 1932. Apart from pig iron, mentioned above, exports of galvanized sheets at 18,675 tons compared with 27,526 tons, are responsible for decreased figures. Most other items show increases on last year.

SHIPBUILDING.

The placing of a number of orders for merchant vessels during the first two months of this year gave promise of a gradual improvement in the industry, but that improvement has not been quite maintained during the month of March. Government contracts recently placed are proving a great boon to a number of firms, but it is recognized that many more orders for merchant tonnage are required before the industry can approach even a normal state of activity. Notwithstanding the tonnage placed on the Clyde since the beginning of the year, there are still a number of yards in the district with no tonnage on the stocks and several are working on one or two vessels only. The shipyards of Messrs. Lithgows Limited are fairly well provided with work for some months ahead, the firm having secured an order for two more steamers for United Kingdom owners, which adds considerably to the work they already have in hand.

Several vessels of under 100 tons gross have recently been launched or completed. These include two fishing vessels, each of 44 tons, for Scottish owners and a 40-ton pilot launch for Burmah, all built by Messrs. Hugh McLean & Sons.

On the North East coast shipbuilders do not at the moment anticipate any appreciable increase of orders. The preliminary work on vessels recently ordered is proceeding and it is expected that shortly there will be a considerable improvement in employment in the yards where these ships are to be built. Messrs. Smith's Dock Company Limited recently booked an order for six trawlers which will enable the firm's shipyard at Southbank to be reopened after about six months idleness.

POTTERY AND GLASSWARE.

Little or no change has occurred in the conditions in the pottery industry during the last month.

Following are details of the total quantity and value of the export of pottery of all classes (excluding bricks) for the first two months of this year, with comparative figures for the two preceding years.

	Quantity *cwts.*	*Value* *£*
January and February, 1933 . .	337,731	405,608
January and February, 1932 . .	120,746	446,926
January and February, 1931 . .	544,692	537,414

The following statement gives details for each section of the industry:—

Section.	*Value of Exports.* *1933.* £	*1932.* £	*Inc. or Dec.* £ *Inc.*	*Dec.*	*Inc. or Dec. per cent* *Inc.*	*Dec.*
Tiles (all classes) . .	30,040	37,686	–	7,646	–	20·3
Sanitary ware . . .	92,519	106,684	- -	14,165	–	13·3
Chinaware . . .	24,852	21,904	2,948		13·5	–
Electrical porcelain . .	9,630	16,145		6,515	-	40·3
General earthenware . .	208,440	208,237	203	—	0·1	–
Stoneware . . .	3,924	6,944		3,020		43·5
Refractory goods and clay products not elsewhere specified	36,203	49,326	- -	13,123	--	26·6
Total .	405,608	446,926	—	41,318	—	9·2

Following are figures of the exports of glass and glassware during the first two months of 1933, with comparative figures for the two preceding years.

	£
January and February, 1933	190,547
January and February, 1932	212,036
January and February, 1931	253,685

Messrs. Pilkington Bros. Ltd., St. Helens, Lancashire, manufacturers of plate and window glass, have recently placed on the market a new production to be sold under the name "Armourplate glass" of which the following particulars supplied by the firm, may be of interest:—

> "Armourplate glass is a natural glass which has undergone a special treatment whereby many new and important characteristics are acquired. It retains the transparency of ordinary glass and will not discolour in use. The glass will stand a dead load three to four times as great as the load required to fracture ordinary glass. It will resist very violent shocks without breaking. A steel ball which will break a piece of ordinary plate glass when dropped from a height of 20 inches has to be taken to a height of at least 120 inches before it will break a similar piece which has had armourplate treatment. When armourplate glass does break it shatters into very small fragments which are too small to cause any injury worse than surface scratches. The glass will stand large differences of temperature on its two surfaces without breaking. It will resist molten lead.
>
> "This glass is sold in cut sizes. It cannot be cut or 'worked' after receipt by the customer, and the manufacturers cannot be responsible for breakage due to this cause. The glass can, however, be worked by the manufacturers prior to the armourplate process being applied.
>
> "The glass can be manufactured in various sizes up to 70 inches by 50 inches according to thickness.
>
> "Armourplate glass can be used for windows and doors, oven doors, show cases, shelves, table tops, railway carriages, port lights, fire screens, signs, ships' fittings, etc."

TEXTILES.

COTTON.

The raw cotton market has remained quiet during the past month, partly owing to the prevailing uncertainty as to government action in the U.S.A. for the restriction of crops, and partly to the closing of the New York and New Orleans cotton exchanges. Prices at Liverpool rose in anticipation of a fall in the dollar and a rise of commodity prices in the U.S.A., but when exchange dealings were resumed there was little or no change in the sterling-dollar rate, and prices at Liverpool fell to a little lower than they had been before the "banking holiday." During the period of American inactivity a considerably increased business in futures was done at Liverpool, buying orders coming in from various foreign centres, especially Bombay. Liverpool spot prices seem now to have recovered and Middling American is once more quoted at over 5d.

In the Manchester market many buyers withdrew their offers, while manufacturers preferred not to quote, so that business for a few days was almost at a standstill. The rise in the value of silver provoked increased inquiry from China, but was not sufficiently maintained for the promise of increased orders to be fulfilled.

Occasional sales have taken place in dhooties for Calcutta and in mulls for Madras and Karachi. Egypt and the Near East have bought a few lots of bleaching cloths. Demand from Central and South America has been small, and only scattered sales of finishing cloths and prints have been effected. The Dominions have also been quiet, though drills have been in some demand for Australia.

In the yarn market the home trade has supplied most of the demand, which has been for coarse and medium counts of American.

The exports for February decreased a little from those for the previous month—the principal falling-off being in greys and printed cloths; bleached and piece dyed cloth on the other hand rose somewhat. The figures for all kinds of cloth are higher than for the corresponding month last year.

Yarns.	*February, 1933.* *1,000 lbs.*	*January, 1933.* *1,000 lbs.*	*February, 1932.* *1,000 lbs.*
Grey	10,530	9,176	12,015
Bleached and dyed . .	1,354	1,471	1,348
Piece Goods.	*1,000 sq. yds.*	*1,000 sq. yds.*	*1,000 sq. yds.*
Grey	33,893	36,057	31,368
Bleached . . .	69,630	68,825	65,947
Printed	29,303	31,576	27,301
Piece dyed . . .	51,655	50,639	46,238
Yarn dyed . . .	10,079	10,246	9,636
Total Piece Goods .	194,561	197,346	180,491

WOOL.

The export trade. More semi-manufactures and woollen and worsted tissues were exported during February this year than in February, 1932, and the two-month quantities were also greater than the corresponding period last year with the exception of worsted and alpaca and mohair yarns. Fewer flannels, tapestries, pile fabrics, mohair, alpaca and cashmere fabrics, however, have been exported during January/February this year than in the first two months of 1932. The increased export of piece goods is very interesting since it is here that the United Kingdom's overseas trade has been steadily shrinking for so long.

Steady business is reported in flannels with Canada and Australia. Some South African enquiries have been received in Bradford for light weight serges and fancy worsted. Indent business on a small scale is coming from India and a few orders from China for venetians, gabardines and serges have been received. These are chiefly for Dairen and fancy suitings for Hong Kong. The outlook in German markets is obscure, but shipments are taking place as usual. Small lots of fine indigo serges have been bought for Colombia and there have been a few repeat orders from the British West Indies.

Dewsbury and Scotch tweed manufacturers were reported to be busier towards the end of February.

New wool fabrics at the British Industries Fair.—Yorkshire and Scotch manufacturers exhibited an attractive display of fabrics in great variety. It is not possible here to describe each new weave combination and colour. Special mention may, however, be made of the Chanel-Broadhead wool dress fabrics and velvets for the exclusive fashion trade, made in England for the first time; the "Concord" green worsted fabrics for sports and summer wear featured by G. Garnett & Sons, Ltd.; and the display of Lanatex suitings, dress and costume cloths by Hy. Mason (Shipley) Ltd.; Ilota Sales Ltd., exhibited fashion fabrics covering all weights of wool cloths from the lightest georgettes to heavy autumn coat fabrics, as well as rayon and real silk fabrics used by the leading modelists in both Paris and London. These cloths are fast becoming known under such names as "Deauvilota", "Sonilota", "Belsylota", "Honilota", "Soirilota", "Irylota", "Crimpilota", "Aspilota".

Messrs. T. F. Firth, Ltd., the well known carpet and furnishing fabric manufacturers featured worsted and mohair velvets for theatre and cinema furnishing. Many of the exhibitors displayed the branded names woven in contrasting colours down the selvedge, demand for which is so often made in the export trade.

LINEN.

Supplies of home grown flax in the Ulster markets are diminishing. Imports from the Continent have been rather meagre during the past few weeks and there has been a slight downward tendency in prices since the last report. The Northern Ireland Ministry of Agriculture gives the average price of Irish flax for the week ended 11th March, as 7*s*. 9*d*. per stone.

It is generally anticipated that there will be an increase in the area sown with flax in Northern Ireland during the approaching season.

Fine yarns are in considerable demand but for the rest there is little change to report in regard to the yarn end of the industry.

Weavers report that business is very quiet. The financial crisis in the United States of America is, of course, reacting to the disadvantage of the linen trade.

The Trade and Navigation Returns for February reveal a substantial increase in the export of piece-goods to the United States of America as compared with such exports in February, 1931 and 1932. The value of piece-goods exported was £144,688 as compared with £125,682 in February, 1932, and £108,110 in February, 1931. It seems likely, however, that the ground gained will, in view of the present situation of the United States of America, be shortly lost again. Exports of piece-goods to China, British South Africa and Canada in February showed an increase when compared with exports for February, 1932. On the other hand exports to British India and Australia showed considerable declines.

The value of linen goods imported into the United Kingdom in February, was £14,677 as compared with £31,442 in February, 1932, and £51,375 in February, 1931.

The value of linen goods exported from the United Kingdom in February, was £434,005, as compared with £423,675 in February, 1932.

The total values of linen goods exported during January and February, 1931, 1932 and 1933, were respectively £948,891, £868,543 and £868,388, and the quantities of linen piece-goods exported during the same periods were 10,999,100, 12,011,700 and 12,896,300 square yards.

PAPER.

The improved conditions in the paper industry reported last month is being maintained, and most sections of the industry appear to be fairly well engaged. During the last two or three years production has been undertaken in the United Kingdom of many types of paper which formerly were supplied exclusively from abroad, such as, for example, M.G. sulphite, thin M.Gs. for wrapping and paper bag making, grease-proof, glazed transparencies, and another has recently been added to the list, *viz.*, a special transparent tissue 9 lb. double-crown, which is now being manufactured by the Dartford Paper Mills Ltd., of Dartford, Kent.

The following figures show the total exports of paper, cardboard, etc. for the first two months of 1933, compared with the corresponding period of the two previous years:—

	Cwts.	£
1933	629,485	981,245
1932	622,292	1,060,607
1931	551,153	1,091,579

The decline in value of the 1933 exports, as compared with 1932 is, of course, due to the general fall that has occurred in the selling prices.

The following is a detailed table showing the value of the exports for the first two months of 1933, compared with the same period of 1932:—

	1933.	*1932.*	*Inc.*	*Dec.*	*Inc.*	*Dec.*
Paper	£	£	£	£	%	%
Printing	376,870	408,683	—	21,813	—	5·3
Writing	69,532	71,934	—	2,402	—	3·3
Packing and wrapping	34,506	37,264	—	2,758	—	7·4
Tissue . . .	22,424	30,987	—	8,563	—	27·6
Coated papers	68,688	84,088	—	15,400	—	28·3
Other sorts .	83,192	79,286	—	—	—	—
Stationery . .	133,496	151,054	3,906	—	4·6	—
Paper bags	14,374	20,810	—	6,436	—	30·9
Boxes and cartons . .	32,057	35,305	—	2,894	—	8·2
Millboard, strawboard, leather board, etc.	37,411	39,014	—	1,593	—	4·0
Playing cards . . .	14,359	12,115	2,244	—	15·6	—
Other sorts	94,336	90,067	4,269	—	4·5	—
Total .	981,245	1,060,607	—	99,362	—	9·2

AUTOMOBILE AND ALLIED TRADES.

A COMING OF AGE.

With the advent of 1933 the Morris concern celebrates its coming of age as a motor car manufacturing organisation, the first Morris car—a Morris-Oxford two-seater—having been sold in 1912.

The Cowley Works, which are now assembling eight types of cars in over thirty different body styles, cover an area of nearly 82 acres, employ upwards of 1,000 people and have a weekly pay-roll of £20,000. The Morris Engines Branch at Coventry has a floor area of approximately 450,000 square feet, a personnel of 2,750, and a pay-roll of £11,000 per week.

MAKING ITS OWN MACHINES.

Motor Factory's Enterprise.

That the United Kingdom motor industry is determined to maintain the leading position it has achieved, is quite evident from the constantly improving production methods it employs.

As an instance, mention must be made of the construction of many special machine tools at the Austin factory. Not content with obtaining these machines from abroad, as hitherto has proved necessary, the Austin production experts have now commenced to design and build many of the tools required for special processes in motor manufacturing.

The latest batch now nearing completion comprises five crankshaft lathes and eighteen gear running-in machines.

Undoubtedly, one of the finest machine tools recently produced in the Austin factory at Longbridge is a diamond borer for machining pistons to an accuracy of ·00025 inch.

At the moment there are nearly 200 machines operating in the Austin factory that have been designed and built there, and this number is rapidly increasing.

In one of the busiest shops all forty-six machines, without exception, are of Austin manufacture.

TITANS IN MADRID.

A few months ago the first double decker ever to be seen in Spain made its appearance on the streets of Madrid and attracted an enormous amount of attention wherever it went. This was a Leyland Titan of the latest type, with specially-designed, Leyland, double-deck bodywork, having left-hand entrances.

This double-decker opened up new possibilities to the Madrid Tramways authorities and after giving the vehicle a thorough testing, they decided to purchase further models of this type.

ANOTHER LEYLAND REFUSE COLLECTOR.

The policy of designing each type of vehicle for its own particular job is one which Leyland Motors, Ltd., has always followed. When the Company introduced, a few months ago, its 7-cubic yard Cub refuse collector, it was at once apparent that every detail in its construction had been considered carefully with a view to increasing the efficiency of the vehicle at its own particular task.

Municipal authorities, after inspection, were soon convinced of the merits of the new model and the Company has now brought out a larger model, with a body capacity of 10 cubic yards. The new model has been designed on the basis of the heavier Cub goods models, and although a special refuse vehicle, it incorporates the many desirable features of the Cub type.

NEW METAL FOR MOTOR CARS.

Cylinders of Chrome Alloy.

The use of a new metal for the cylinders of cars is announced by the Triumph Company of Coventry.

For five years the firm's research department has been experimenting with alloys for cylinders with a view to preventing the excessive wear which has become recognised as almost inevitable in the modern high speed engine.

The moment the metallurgists were satisfied that they had solved the problem, engines were constructed from the new metals and were subjected to continuous night and day tests under ordinary road conditions. When three cars had completed 30,000 miles each the equivalent of three or four years average running--the engines were dismantled.

The result was that practically no wear could be detected by instruments capable of measuring to less than a tenth part of one thousandth of an inch. In the ordinary way, after this mileage, an engine would need its cylinders re-ground and "oversize" pistons would be necessary.

The new material, which is a chrome alloy, has now been adopted for general production. Its employment reduces oil consumption to a minimum and prohibits the development of mechanical noise. In addition, distortion is negligible so that valve grinding is seldom necessary.

DEVELOPMENT OF OVERSEAS TRADE.

Company with More Distributors Abroad than at Home.

Ever since the immediate post-war days, when demand for cars exceeded supply, manufacturers have realised that the export markets were the only possible solution to overproduction difficulties.

Various disadvantages have been alleged against British cars overseas, the most genuine one, some time ago, being the difficulty of obtaining spare parts. This was attacked in various ways, perhaps the most successful method being that inaugurated by the Standard Company.

With a far-sighted policy this concern instituted a spares scheme, whereby spare parts to the value of £5 per car for the first ten cars had to be purchased by ovearseas distributors. With the second ten, spares to half that value were shipped and with subsequent cars a smaller allotment of spares was required. The spares list was carefully itemised, so that for a relatively small outlay a comprehensive stock was accumulated. In addition, very complete service bulletins were issued at regular intervals, and representatives of many overseas distributors were given practical instruction in the company's service school at Coventry.

By this means service in distant parts of the world has become almost as efficient as it is in Great Britain. A striking result of the policy is that the Standard Company at the present time actually has more main distributors abroad than it has at home.

AVIATION.

STRENGTH AND ENDURANCE OF BRITISH AIRCRAFT.

Evidence, from most authoritative sources, which is eloquent of the trustworthiness, endurance and safety of United Kingdom aeroplanes was made public recently. The Marquess of Londonderry, Secretary of State for Air, was able to point to a saving of £152,000 on the Technical Vote in the Air Estimates for 1933, as entirely attributable to the increased durability of British aircraft and aero engines. On the civil side, United Kingdom insurance companies have affirmed their belief in the security of travel in United Kingdom air liners by reducing the premiums charged for passenger assurance policies to the same levels as those charged for travel by boat or train.

The amount allotted for the purchase of machine spares in the Air Estimates is less by £82,000 than the equivalent sum voted last year. That covering engine spares is down by £70,000. The combined saving is equal to 11·4 per cent. of the sums voted under these heads in 1932. Nor does this big saving go with reduction in the sums allotted for the acquisition of complete machines and engines, which are up by £147,000 and £3,000 respectively.

The Air Minister attributes this saving to the greater endurance of aircraft frames and engines, as measured in hours of flying done between overhauls. In the United Kingdom modern military aeroplanes are now nearing the 1,000 hours mark before overhaul becomes necessary, and engines run easily up to 500 hours. Lord Londonderry adds that the increase in the number of flying hours between overhauls of airframes results in " a consequential economy in expenditure on reconditioning and the purchase of spares." He continues: " All-metal aircraft have given excellent results under the most arduous service conditions, including hot climates. Although it is too early to say that corrosion has been completely overcome, it is no longer a serious difficulty with landplanes and in seaplane construction a great advance has been made as a result of development in metallurgical knowledge and the protection of exposed surfaces."

Increased longevity of material brings important economies in its train, not only in reduced direct expenditure but in other ways. In the Royal Air Force, because of the introduction of metal construction and the greater trustworthiness of engines as compared with a very few years ago, it is no longer considered necessary to allot two skilled men—a fitter and a rigger—to each aeroplane, and the Air Council have decided to work gradually to a basis of one skilled and one unskilled man for each machine.

The new passenger insurance rates agreed by the British Aviation Insurance Group with Imperial Airways work out as low as one shilling a day for a cover of £1,000. The previous average rate was as high as 12*s.* a day for the same cover. Safety of land and sea travel is generally recognized, and is reflected in the low rates of insurance applied to transport by boat and train. For some years past the speed of goods transport by air and more especially the added security gained by the aerial despatch of fragile or valuable articles, have been sufficiently well understood for air freightage insurance rates to rule considerably below those charged for surface transport of similar goods. Now the insurance companies have taken the logical step of extending that partial recognition of the security and regularity of air transport to the passenger traffic.

Savings under the new rates are important. An Imperial Airways passenger to India will in future be charged 14*s.* for a cover of £2,000 on the journey, which takes seven days. The rates generally operative would have meant payment of £7 4*s.* Actually the new premium for the air journey to India works out at two shillings *less* than that charged for the journey by steamship.

This new concession is the culminating reward of the policy pursued by the air transport company since its inception in 1924. From the start it has considered safety and regularity the paramount needs of an air service. It has employed large, multi-engined aeroplanes which land comparatively slowly and are under full control at all points of the speed range. The multiplication of magnificently trustworthy power units, the ample reserve of power, and the fine flying qualities of the aeroplanes have made emergency landings away from an aerodrome of the rarest occurences in the record of transportation.

That nations overseas appreciate the many fine qualities of United Kingdom aircraft material, in endurance and long life as well as in performance, is apparent from a study of the most recent statistics of export trade. No fewer than sixty-eight states, located in all parts of the world, took aeroplanes, aero engines or accessory equipment manufactured in the United Kingdom in 1932. Chief of the importing countries, as measured in the value of declared exports from Great Britain, were Esthonia, Sweden, Belgium, Persia, China (including Hong Kong), Japan, Brazil and Argentina.

WIRELESS TELEGRAPHY.

Radio at the British Industries Fair, 1933.

The United Kingdom Radio Industry was, as usual. well represented at this year's British Industries Fair. The exhibitors, together with those of the musical industry, were accommodated in the Hall of Music on the third floor of the new Empire building, Olympia.

The overseas buyer this year must have been favourably impressed by the notable increase in the number of shortwave receivers exhibited, this being one of the most striking features of the radio section of the Fair.

In view of the overseas demand for a good shortwave receiver of United Kingdom manufacture, it will be worth while to report at some length upon this feature.

E. K. Cole, Ltd., were showing their new S.W. super heterodyne for the first time; it covers wavelengths from 16-2,000 metres and retails at £28 10*s*. 0*d*. (chassis only).

Consolidated Radio Co. showed their "British Empire Screened Five" covering the wavebands 13/65 and 210/560 metres; this chassis in a suitable teak cabinet retails at 26 guineas. They are also marketing a shortwave converter at 4 guineas.

A. C. Cossor, Ltd., have now entered the shortwave market with two short and medium wave super heterodyne receivers for battery and mains operation.

J. J. Eastick were making a special feature of their shortwave converter, which is available in both mains and battery types.

The Epoch Manufacturing Co., Ltd., have entered the receiver market for the first time this year; at the moment their only contribution to the shortwave field is a converter retailing at 4 guineas.

Faraday All-wave Wireless, Ltd., were showing their all-wave super heterodynes in A.C. mains, D.C. mains and battery types. The construction of these receivers is suitably adapted for use in tropical climate.

Besides their well-known battery S.W. super heterodyne receiver with plug-in coils, the General Electric Co., Ltd., were demonstrating their new A.C. mains model built on the same lines.

Hustler, Simpson & Webb, Ltd., are marketing a 4-valve shortwave receiver (18/100 metres) suitable for use with external loudspeaker and batteries at the modest price of £6 12*s.* 6*d.*

Mavox, Ltd., a recent newcomer to the radio industry, were exhibiting three shortwave super heterodyne receivers, two being battery driven. These receivers are definitely intended for export.

Stratton & Co., Ltd. the well-known makers of "Eddystone" radio apparatus, were showing, in addition to their usual line of goods, a new departure in the form of a self-contained (5-valve and rectifier) "Super Six," covering short and medium wavebands, suitable for operation on A.C. mains; it retails at £30. Another entirely new receiver shown by this firm was the "1933 Overseas Four," covering 12/65, 250/530 metres wavebands, wave changing being effected with a switch and not by coil changing. It retails at £16. All the products of this firm are admirably suited for use in the tropics.

Rotax, Ltd., and the Electro Dynamic Construction Co., Ltd., were both exhibiting a useful range of converters for supplying high tension current from a 6-volt car battery. The majority of these converters have been manufactured in co-operation with prominent manufacturers of shortwave receivers.

Another outstanding feature of the exhibition was the rapid increase in the number of sets shown which employed the principle of quiescent push-pull output. This is a recent development brought to the United Kingdom from America, where the system has been used for some eighteen months.

The radio section also included a representative exhibition of components and accessories.

THE HALFORD EMPIRE SHORT WAVE RADIO RECEIVER.

Type 2 S.W.

Halford Radio, Ltd., of 39, Sackville Street, London, W.1, have recently placed a shortwave two-valve receiver on the market. This receiver is especially suitable for use in up-country districts of the Dominions and Colonies. The outstanding feature is its ability to pick up Empire broadcasts at maximum strength in any of the zones with the absolute minimum of current consumption, a most important point to those resident at a distance from charging stations or battery supplies.

In designing this receiver, the Halford Company have borne in mind the special requirements of the user of this type of set. These requirements are governed by the fact that the receiver will mainly be operated in places where service is unobtainable and where batteries cannot be charged conveniently except at long intervals. Bearing this in mind, undoubtedly a two-valve receiver (a screen-grid detector and pentode output) such as Halford's have produced is the most suitable.

The low tension supply can be obtained from a 2-volt accumulator, or from two dry cells giving 3 volts, alternative terminals being provided for this purpose. The low tension consumption is only 0·38 amps.

The high tension supply is taken from a 100-volt dry battery, the current consumption from which is in the neighbourhood of 5 milli-amps.

The stations may be held much below the oscillation point without any instability. This is a most valuable feature in a small receiver.

The wavelength band covered is 12/60 metres, which is ample to embrace all the Empire wavelengths.

Special precautions have been taken in the design of the output stage in order to avoid H.F. current getting through to the telephone circuit. This ensures that the movement of the telephone cord does not in any way affect the tuning. The receiver has been made suitable for use in tropical climates, both in the selection and assembly of components, which are mounted on an aluminium base, and the case is constructed of teak.

Halford Radio, Ltd., will shortly be producing a 4-valve, superheterodyne, all mains receiver, especially designed for shortwave reception, which has been tested out with remarkable results, and factory production only awaits supplies of an automatic volume control to minimise fading which is incorporated in the circuit. This receiver is designed primarily for those areas where a mains supply is available.

CATALOGUE LIBRARY.

The undermentioned catalogues relating to United Kingdom Manufacturers have recently been received and may be consulted by *bonâ fide* firms or individuals at the Office of His Majesty's Senior Trade Commissioner in India, Fairlie House, Fairlie Place, Calcutta.

Names and Addresses.	*Description.*
The Austin Motor Co., Ltd., Longbridge Works, Birmingham.	Motor Cars, Delivery Vans, and Ambulances.
Wm. Jessop & Sons, Ltd., Brightside Works, Sheffield.	Tool Steels.
The Mirrlees Watson Co., Ltd., Scotland Street, Glasgow.	Sugar Machinery.
Gunn & Moore, Ltd., 49, Carrington Street, Nottingham.	Sports Goods.
Whitefields, Ltd., Greengate, London, E.13.	Chocolates, Toffees, Fruit Boilings, etc.
W. & M. Duncan, Ltd. (Whitefields, Ltd.), Greengate, London, E.13.	Chocolate and Confectionery.
Aimer & Booth, Ltd., Bush House, Aldwych, London, W.C.2	"Kwick" dry cleaning plant.
Russell, Newbery & Co., Altrincham, Manchester.	High Speed Diesel Oil Engines Marine Diesel Engines.
Empire Specialities (Proprietors: Hygmat Sales, Ltd.), 6, Canal Road, Kingsland Rd., London, N.1.	Self inking Dater
Rowntree & Co., Ltd., York.	Cocoa, Chocolates and Confectionery.
J. A. Crabtree & Co., Ltd., Walsall.	Switches and Switchgear.
Measurement, Ltd., Terminal House, Lower Belgrave Street, Victoria, London, S.W.1.	Electricity & Water Meters.

Names and Addresses.	*Description.*
W. H. Harling, Ltd., 117, Moorgate, London, E.C.3.	Mathematical, Drawing and Surveying Instruments.
B. S. A. Cycles, Ltd., Birmingham	Motor Cycles and Side Cars.

Catalogues marked with an asterisk have also been received in the Office of His Majesty's Trade Commissioner, 3, Wittet Road, Ballard Estate, Bombay, where they may also be consulted by *bonâ fide* firms or individuals.

In addition, His Majesty's Trade Commissioner, Bombay, has recently received the undermentioned catalogues:

Names and Addresses.	*Description.*
The Coal Concentration Co., Ltd., 51, Victoria Street, London, S.W.1.	The Elmore Process of Coal Cleaning.
Electroflo Meters Co., Ltd., Abbey Road Works, Park Royal, London, N.W.	Steam, Water, Oil, Gas and Air Meters, Liquid Level Indicators and Recorders, Pyrometers, Thermometers, etc.
The Lea Recorder Co., Ltd., 28, Deansgate, Manchester.	Water Gauging and Measuring Appliances and Accessories.

TRADE ENQUIRIES.

The names of the United Kingdom firms referred to in the enquiries mentioned below will be furnished to reputable firms on application to His Majesty's Senior Trade Commissioner, Post Box No. 683, Fairlie House,

No. 376-33.

A United Kingdom manufacturer of Haulage Gear, Reduction Gear and Mechanical Handling Plant desires to appoint agents in this area.

No. 463-33.

A United Kingdom firm manufacturing Hand Inspection Lamps constructed mainly for use in Chemical Works, Ships, Shipyards, Breweries and anywhere where moisture is prevalent, wish to get in touch with an Electrical firm who will be prepared to undertake their representation as sole selling agents or on the basis of buying agents.

No. 472-33.

A United Kingdom merchant firm with many years' experience in the supply of millstores are desirous of getting in touch with suitable firms in Calcutta, Madras, Ahmedabad and Cawnpore. The firm are specially interested in leather belting, hair belting, picking bands, buffers, pickers and roller skins.

MGIPC—L—71HMTC—3-5-33—1 050

H. M. TRADE COMMISSIONERS IN INDIA.

Calcutta—

Sir Thomas M. Ainscough, C.B.E.,
His Majesty's Senior Trade Commissioner in India and Ceylon.

Mr. R. B. Willmot,
His Majesty's Trade Commissioner at Calcutta.
Post Box No. 683, Fairlie House, Fairlie Place.
Telegraphic Address.—" Tradcom, Calcutta."
Telephone No.—" Calcutta 1042."

Bombay—

Mr. W. D. M. Clarke,
His Majesty's Trade Commissioner at Bombay.
Post Box No. 815, 3, Wittet Road, Ballard Estate.
Telegraphic Address.—" Tradcom, Bombay."
Telephone No.—" Bombay 23095."

Ceylon—

Imperial Trade Correspondent,
The Principal Collector of Customs, Colombo.

With Compliments

MAY 1931

The

Commercial Bulletin

A Monthly Review of Official and other
announcements relating particularly
to British Export Trade

Issued by
HIS MAJESTY'S SENIOR TRADE COMMISSIONER
IN INDIA AND CEYLON.

FAIRLIE HOUSE,
[illegible] *FAIRLIE PLACE,*
CALCUTTA.

CONTENTS.

PAGE.

REGULATIONS APPLICABLE TO COMMERCIAL TRAVELLERS IN INDIA 1

GENERAL 1

FINANCE 4

CONTRACTS SECURED 7

IRON AND STEEL 11

SHIPBUILDING 12

MACHINE TOOLS 13

RESEARCH AND TESTING EQUIPMENT 15

TEXTILES 17

AUTOMOBILE AND ALLIED TRADES 20

RESEARCH WORK IN THE UNITED KINGDOM RUBBER INDUSTRY . 22

ELECTRICITY'S ADVANCE IN THE UNITED KINGDOM . . . 24

CATALOGUE LIBRARY 26

TRADE ENQUIRIES 29

REGULATIONS APPLICABLE TO COMMERCIAL TRAVELLERS IN INDIA.

With the August, 1929, issue a Special Supplement to the "Commercial Bulletin" was included giving the Regulations Applicable to Commercial Travellers in India and a Supplement subsequently issued in May, 1931, embodied a number of alterations and additions to the Regulations. Further revisions have now been made and a Special Supplement giving the Regulations as at present in force is being published with this issue of the "Commercial Bulletin". Additional copies of the Regulations may be obtained on application to His Majesty's Trade Commissioner at Calcutta or to His Majesty's Trade Commissioner at Bombay.

GENERAL.

In comparing the figures of United Kingdom overseas trade for March with those for February it should be noted that there were three more working days in March than in February and it might therefore be expected that, apart from any variation in the total of imports or exports due to seasonal changes, and to changes in prices, there would be an increase in the value of the trade in March as compared with the previous month.

The value of both imports and exports during March was substantially greater than in February. Total imports were valued at £56·3 million, being £7·3 million (15 per cent.) more than in the previous month, while exports of United Kingdom produce and manufactures amounted to £32·6 million, an increase of £4·6 million (17 per cent.) as compared with February, this total being higher than that recorded for any month since April, 1932. The value of exports of imported merchandise declined by £0·5 million to £1·0 million. The increase in the value of imports, which affected all the principal classes of goods, was greatest in respect of food, drink and tobacco (£4·0 million or 16 per cent.); imports of manufactured goods increased in value by £2·3 million (21 per cent.) and those of raw materials by £0·9 million (7 per cent.). The increase in the value of exports was due almost entirely to an increase in respect of manufactured goods, exports of which amounted to £25·4 million, or £3·9 million (18 per cent.) more than in February. This value is greater than that recorded for any month since July, 1931, with the exception of April, 1932. The increase as compared with the previous month affected all the principal groups of manufactured articles except woollen and worsted yarns and manufactures, and was greatest in respect of the vehicles group (£1,261,000, or 77 per cent.). Exports of food, drink and tobacco were about the same as in February, while exports of raw materials showed an increase of £0·1 million, or 13 per cent.

The decline during March in the value of exports of imported merchandise was due entirely to a decrease in respect of raw materials, re-exports of food, drink and tobacco and of manufactured goods being somewhat greater than in February, while the total for the latter class was higher than in any month since March, 1932.

In comparison with March, 1932, there was a decline in the value of imports of £1·8 million (8 per cent.), each of the three main classes being affected. Exports of United Kingdom goods showed an increase of £1·4 million (4 per cent.), principally in respect of manufactured articles; exports of raw materials were 11 per cent. greater in value than a year ago, while there was an appreciable decline in the case of food, drink and tobacco. Re-exports were substantially lower in value than in March, 1932.

The excess of imports over exports of merchandise in March was £19·8 million, being £3·1 million more than in February and £4·7 million less than in March, 1932. The excess in the first quarter of this year (£56·9 million) showed a reduction of £28·1 million compared with the corresponding period of 1932. Imports of bullion and specie in March exceeded exports by £19·6 million; in the first three months of this year the excess amounted to £13·0 million.

ROYAL AGRICULTURAL SHOW, DERBY, 1933.

The Royal Agricultural Society of England's annual show will this year be held at Derby, between July 4th and 8th, both dates inclusive, and there will be much on view that will appeal to overseas visitors interested in farming.

Pride of place must be given to the cattle and it is worthy of note that only pedigree stock will be on show in friendly competition for approximately £15,000 prize money. The parade of prizewinners in the Grand Ring is one of the outstanding events.

The Australian supporter of the ILLAWARA strain will see the finest examples of their progenitors—the Dairy Shorthorn.

The New Zealander will be able to assess the outstanding exhibits of the Channel Island breeds.

The South African can compare the British Friesian with his own country's black and whites.

The ranchers from Canada and Rhodesia will appreciate the standard of exhibits of the Herefords, Sussex, Shorthorns, and Aberdeen-Angus, while all cattlemen will be able to judge what is meant by dual purpose cattle from the various breeds of these strains.

Sheep breeders can be assured of having penned for their inspection the outstanding rams and ewes from the leading flocks of Great Britain.

The first day of the Show will be devoted to judging and visitors are invited to see this as well as the parade of pit ponies.

The second day will make an even greater appeal to visitors from every part of the Empire for it is the intention of the King and Queen to visit the Show.

In addition to the Show, the following are among the goods displayed:—

Agricultural and Dairy machinery.

Pedigree seeds.

Fertilisers and insecticides.

Veterinary medicines.

Refrigerating plant.

Visitors will have the opportunity of meeting manufacturers and suppliers and of placing before them the particular problems and requirements of their own districts.

The Secretary, at 16, Bedford Square, W.C. 1, will be pleased to hear from any overseas visitors who plan to attend and to supply them with full particulars of the special arrangements made for their reception.

5TH TRIENNIAL INTERNATIONAL EXHIBITION OF MODERN DECORATIVE AND INDUSTRIAL ARTS AND OF MODERN ARCHITECTURE, MILAN, 1933.

His Majesty's Government have accepted the invitation of the Italian Government to organize a British Section in the International Exhibition of Modern Decorative and Industrial Arts which will be held in Milan from the 6th May until the 30th September, 1933. The British Exhibit, which will follow, at the express request of the Italian Exhibition Authorities, the same lines as the recent successful Exhibition of British Industrial Art in Copenhagen, will contain exhibits of textiles, silver, pottery, glass and sports goods.

FINANCE.

GREAT BRITAIN'S FINANCIAL YEAR.

(By a Special Correspondent.)

The result of the financial year in Great Britain, which closed on March 31st, once more demonstrates the country's position as being the soundest in the world. When the British people during the previous year performed miracles of economy and self-sacrifice to help their country through an extremely difficult period, it was believed that such a supreme effort could not be repeated. Nevertheless the people have once more shown their patriotism in the characteristically quiet and dogged British manner of "getting on" with an unpleasant job, and saying as little as possible about it.

The Budget which has just matured anticipated a total revenue of £766,800,000 and a total expenditure of £776,000,000 (including the provision of £32,000,000 for redemption of debt), showing an estimated surplus of £800,000. The actual returns just published show a revenue of £744,791,000 and an expenditure of £748,114,000 (including £17,239,000 for sinking fund, but excluding the payment to America)—that is, a deficit of £3,323,000. The payment of the half-yearly instalment of £29,000,000 on War Debt to America was not provided for in the Estimates, neither were receipts from Allied War Debts and Reparations taken into account, as at the time when the Budget was laid before Parliament the whole question of War Debts was dependent on the results of the Lausanne Conference. In any case the two items should under normal circumstances outbalance each other in Great Britain's national account.

On the revenue side, the fall of £52,000,000 in Income-Tax and Sur-Tax receipts since the previous year on the same poundage clearly indicates that the British nation is passing through no easy period. It is indeed the most heavily taxed nation in the world, and however willing it may be to shoulder the load, a point now appears to have been reached when a further increase in the burden of taxation would seem impracticable. Perhaps the most surprising item of receipts is the death duties, which actually exceeded the Budget Estimate by over a million pounds. The previous year the receipts were £65,000,000, and the fact that the Chancellor's optimistic estimate of £76,000,000 was exceeded is due to duty being paid on one of the largest estates which has ever come under the review of the revenue authorities.

Other items of receipts which exceeded the Budget Estimates were Excess Profit Duty and Corporation Tax, sundry loans, and miscellaneous receipts, the last item exceeding expectations by no less than £7,000,000. On the other hand receipts from the Post Office, from Excise Duty—that is duty on articles of consumption—from Customs and various other items were lower than estimated.

On the expenditure side, the persistent unemployment largely accounted for the total being higher than anticipated. Supply expenditure exceeded the estimates by about £11,000,000, but on the other hand there was a substantial drop in the interest and management of the National Debt, which was estimated at £276,000,000 but actually absorbed only £262,304,676. Of the supplementary estimates of £21,600,000 issued during the year for unemployment and to cover the default of the Irish Free State on Land Annuities, over £10,000,000 remained unused.

The British people have every reason to congratulate themselves on a Budget result which, under the present circumstances, must be regarded as extremely satisfactory. Under normal circumstances England should have received from Reparations and War Debts about £37,500,000. Although these payments have been provisionally suspended pending decisions on the Lausanne

Agreement, England nevertheless paid the large sum of £29,000,000 on her own War Debt to America. Had she received her dues from her debtors, the British financial year would have resulted in a clear surplus of £5,250,000.

NEW COMPANIES.

William P. Bonbright & Co., banking and discount agents, of Birchin Lane, E.C., has been registered as a private unlimited company, with a capital of £500,000.

Aberdeen & Commonwealth Line has been registered as a private company with a capital of £500,000 to carry on the business of shipowners, etc. Registered office: New Zealand Chambers, 34, Leadenhall Street, E.C.3.

Woolcombers Mutual Association, Ltd., Bradford.—This company, which was incorporated on the 21st February, has been formed for the main purpose of assisting the woolcombing industry by the purchase and dismantling of redundant and obsolete mills, plant and machinery and their disposal, and the resale of the mills or the sites thereof under restriction against further use for woolcombing. These operations are not addressed to making a profit for the company. The company has a share capital of £10,000 and £346,500 first debenture stock have been authorised and issued.

Woolcombing is the first machine stage in the conversion of raw wool into yarn or cloth in the worsted section of the wool textile industry, the woolcombing part of the work being the conversion of the raw wool into tops. Many woolcombers are parties to the scheme.

AMALGAMATIONS.

Steel Firms to Co-operate.—An agreement has been made between Richard Thomas & Co., and the Whitehead Iron & Steel Co., under which billets will be supplied by Richard Thomas & Co., from their Redbourn Steel Works to the Whitehead Rolling Mills at Newport, Mon. Arrangements have also been made for the erection of continuous bar and strip rolling mills at the Redbourn Works. These mills will be the joint property of the two companies. It is hoped that the present plant of the Redbourn Works will be in full production before the end of June.

Dorman Long & Co.—The process of rationalisation of the iron and steel industry on Tees-side, which was foreshadowed by the late Sir Arthur Dorman years ago, came another step nearer realisation recently, when it was announced that a provisional agreement had been reached by the directors of Dorman Long & Co. and the South Durham Steel and Iron Company for an amalgamation of their interests. The scheme of amalgamation will require the consent of the debenture holders and shareholders of the companies, to whom full details will shortly be communicated. It will bring together an aggregation of capital amounting to nearly £20,000,000. Dorman Long's issued capital is £11,218,146, while outstanding debentures total £5,628,721. South Durham paid-up capital amounts to £1,237,820, debenture stock being £300,000.

Increases in Capital.

	£
Cerebos Ltd., Salt Manufacturers	250,000
The Avon India Rubber Co., Ltd., Motor Tyre Manufacturers	100,000
Callendar Abbots Foundry Companies, Ltd., Iron and Brass Founders	99,000
Vince's Dry Batteries, Ltd., Dry Battery Manufacturers	50,000
The Tunnel Portland Cement Co., Ltd., Cement Manufacturers	200,000
Kelsey-Hayes Wheel Co., Ltd., Motor Car Wheel Manufacturers	90,000
Winget, Ltd., Concrete Machinery Manufacturers	48,500

CONTRACTS SECURED.

Locomotives for China.

An order has been received by the Hunslet Engine Co., Ltd., for six new locomotives from the Chinese Purchasing Commission. The firm is building a special type of engine for use for the Nanking train ferry. This engine represents the latest product of the company and was designed by their draughtsmen to marshal trains up and down the long inclines on the banks of the Nanking River.

Sugar Factories for India.

The Local Agents of Messrs. Duncan Stewart & Co., Ltd., Glasgow, report that they have secured the following contracts:—

Four 400-ton Sugar Milling Plants producing plantation white sugar by the sulphitation process for the following Mills:—

The Phaltan Sugar Works, Phaltan State,
Modi Sugar Mills, Begamabad, District Meerut,
The Vishnu Pratap Sugar Mills Ltd., Khada,
Jagadish Sugar Mills Ltd., Padrauna.

the last two being repeat orders from the Padrauna Raj Krishna Sugar Works, Ltd.

The firm have also secured orders from His Highness the Maharaja Bahadur of Dumraon for a 250-ton Factory, capable of extension to 400 tons capacity, and from the Rawalgaon Sugar Co., of Bombay, for a factory of 150 tons capacity.

In addition to the above factories, the firm also secured orders last season for five factories at Bareilly, Siswabazar, Munderwa, Sasa-Musa and Pipraich; and all these factories are understood to have been crushing satisfactorily during the 1932-33 milling season.

The Local Agents of Messrs. George Fletcher & Co., Ltd., Derby, report that they have secured a contract from Messrs. The Ganga Sugar Corporation Limited, for the supply of a 400/600 ton Double Carbonatation Process Cane Crushing Plant to be erected at Nagina in the Moradabad District.

ORDERS FROM EGYPT.

The Egyptian State Broadcasting Station.

The erection of the 20 Kw Broadcasting Installation at Abu Zabal and a Relay Station at Ras-el-Tin at a total cost of £21,930, has been entrusted to Marconi's Wireless Telegraph Co., Ltd., of London.

Heavy Oil Pumping Unit.

A contract for the supply of pumping machinery in connection with the Artesian Wells at Gebel-el-Asfar, has been awarded to Messrs. Tangyes, Ltd., of Birmingham.

Other contracts awarded are as follows:—

Messrs. W. H. Allen & Sons, £14,700, floating pumping stations (in part).

Thos. Cook & Son, Ltd., £1,900, C.I. piping for Galioub Waterworks.

Paterson Engineering Co., £7,772, clarifier, Mousourah Waterworks.

British Thomson Houston Co., £2,041, electric light installations at Egyptian State Railway stations (in part).

T. Beynon & Co., Ltd., Cardiff, 169,500 tons of coal.

Lindsay Blee & Co., 60,500 tons of coal.

Primary Batteries, Ltd., London, £968, telegraph and telephone materials.

John Dickinson & Co., £5,307, supply of paper.

5 United Kingdom firms, £1,913, supply of aerial line materials.

Wallace Bros. & Co., £705, supply of teak.

2 United Kingdom firms, £908, supply of power plant.

Brooker Dore & Co., £2,957, supply of tin ingots.

F Smith & Co., £1,038, supply of telephone material.

Coal for Finland.

The Finnish Government have arranged with J. O. Williams (1926) Limited, of Cardiff, to supply on barter terms 40,000 tons of steam coal. They are to take 60,000 tons of pit props in exchange.

Nerbudda Bridge, India.

Braithwaite & Co., Ltd., of Westminster, announce that a contract has been awarded to its associated company in India for the construction of a double track railway bridge across the Nerbudda River 200 miles north of Bombay. The bridge will be 4,600 feet long and contain over 13,000 tons of steel. The work which will cost £400,000 will be completed in 30 months.

Shipbuilding.

The Shaw, Savill and Albion Company, Limited, have placed with Messrs. Harland and Wolff, Limited, Belfast, an order for two refrigerated cargo motorships, each 500 ft. in length and of 12,000 tons dw., with 500,000 cubic feet of refrigerated space. They will be driven by twin sets of Harland-B and W. four-stroke single-acting airless-injection pressure-charged Diesel engines. The contract for these vessels, which are intended for their owners' service between London and New Zealand, *via* the Panama Canal, is the most important placed in the United Kingdom since the "Queen of Bermuda".

The Commonwealth and Dominion Line have placed with Messrs. Swan, Hunter and Wigham Richardson, Limited, Newcastle-on-Tyne, an order for a twin-screw refrigerated motorship of 9,000 tons gross, for their Australian and New Zealand trade. She will be fitted with Doxford opposed piston engines, supplied by Messrs. Barclay, Curle and Co., Limited, Glasgow.

The National Benzole Company, Limited, have placed an order with the Rowhedge Iron Works Company, Limited, Rowhedge, near Colchester, for a twin-screw motor-driven coasting oil-tanker of 350 tons dw., 135 ft. in length by 25 ft. beam and 12 ft. depth. She is to be fitted with two sets of Gardner engines, each developing 190 b.h.p.

A Twin-screw Mission Ship. The Melanesian Mission has placed an order with Cammell Laird and Co. for a mission ship, 106 ft. in length, to replace the "Southern Cross". She will be equipped with two Gardner slow-running Diesel engines of 120 b.h.p.

Amongst orders recently placed with the Parsons Oil Engine Company, Ltd., of Southampton, are included a 10/20 H.P. paraffin engine for a 20 ft. fishing boat for service in the Mediterranean, and a 25 H.P. petrol engine for installation in a service launch in Borneo.

A number of orders from overseas have been received by Messrs. Ailsa Craig, Ltd., for high-speed Diesel engines; one is for a 20/40 H.P. four-cylinder set for installation in a vessel in Greece. A three-cylinder 18/30 H.P. engine is being despatched by this firm to Canada, and a two-cylinder 12/20 H.P. unit to the United States. Two high speed Diesel engines have been ordered for the Argentine, one for South Africa, one for Trinidad and another for Bermuda. All are of the high-speed Diesel type.

IRON AND STEEL.

It is evident from the returns furnished by the National Federation of Iron and Steel Manufacturers that the iron and steel industries of the United Kingdom anticipate a continued improvement in demand, for seven blast furnaces have been blown in since the beginning of March, the total number of furnaces in blast being now seventy. Production of pig iron in March amounted to 332,200 tons compared with 270,800 tons in February and 335,600 tons in March, 1932. The daily rate in March was therefore about 10 per cent. higher than in February.

Exports of pig iron to overseas markets during the period under consideration also show a considerable jump, the official returns for February and March being 5,673 tons and 9,426 tons respectively.

The output of steel ingots and castings in March reached a figure of 577,700 tons compared with 482,700 tons in February and 462,800 tons in March, 1932.

Overseas trade, both import and export, made a considerable advance during March over the previous month, even taking into account the fact that there were three more days for trade. The imports amounted to 96,963 tons, an increase of 9,001 tons, while exports amounted to 154,971 tons, an increase of 19,352 tons. Apart from pig iron mentioned above, the principal commodities contributing to this increase are strip, galvanised sheets and tinplates. Practically all other items remain fairly constant.

It would appear that the bulk of the increase in raw steel production is going into home production as very few of the finished steel products are finding any marked improvement in demand from overseas. The rollers of railroad material are at the moment fairly well booked with orders as some of the home railways have now ordered their requirements and at the same time orders are in hand for South Africa, China and Finland. The

March export returns for railway materials show a certain slight improvement which is practically all accounted for by increased exports in sleepers and fishplates.

SHIPBUILDING.

According to statistics issued by Lloyd's Register of Shipping for the first quarter of the year, there were 68 vessels of 252,401 gross tons under construction in Great Britain and Ireland at the end of March, an increase of 18 vessels and of 26,904 gross tons in the work in hand as compared with the very low figure of 50 vessels and 225,497 tons at the close of the previous quarter. The present total 252,401 tons is, however 125,572 tons less than the tonnage which was being built at the end of March, 1932. The figures for the quarter under review include about 147,000 tons on which work has been suspended. It is, however, satisfactory to note that the slight increase in the quarterly total of work in hand recorded above is the first to be noted since 1930. Of the tonnage now being built in the United Kingdom about 65,000 tons- approximately 26 per cent.—is intended for registration abroad or for sale.

The tonnage under construction abroad, 488,543 tons, is about 52,000 tons less than that which was in hand at the end of December, 1932, and is the lowest recorded since December, 1909. Of the total tonnage under construction throughout the world at the end of the quarter, 34·1 per cent. was being built in Great Britain and Ireland, and 65·9 per cent. abroad. The five leading foreign countries are:—

	Tons.
France	97,489
Sweden	82,332
Italy	59,098
Japan	55,570
Germany	52,565

The following table shows the number of vessels and gross tonnage commenced, and also that launched, in Great Britain and Ireland and also by shipbuilders abroad for the quarters ended 31st March, 1933, and 31st December, 1932:—

Vessels commenced and vessels launched.

—	Quarter ended 31st March, 1933.				Quarter ended 31st December, 1932.			
	Commenced.		Launched.		Commenced.		Launched.	
	No.	Gross tons.	No.	Gross tons.	No.	Gross tons.	No.	Gross tons.
Great Britain and Ireland.	33	77,306	13	12,942	9	7,410	21	39,403
Rest of World	43	63,793	42	79,791	61	76,371	37	173,838

The tonnage commenced in Great Britain and Ireland during the last quarter exceeded by more than 5,000 tons that on which work was started during the whole of the year 1932.

Delivery of the Twin-Screw Fire and Salvage Tug "Cochin".

The powerful twin-screw fire-fighting and salvage tug "Cochin", destined for service at the port of Cochin, sailed for India at the end of March, having carried out exhaustive trials on the Firth of Forth.

The vessel was constructed in the Victoria Shipyard of Messrs. Henry Robb Limited, Leith, and during construction the hull and machinery have been under the supervision of Messrs. Sir J. H. Biles and Co., consulting engineers and naval architects to the Indian Government.

The dimensions of the vessel are:—110 ft. in length b.p. by 29 ft. 6 ins. breadth moulded by 13 ft. depth moulded; she has been constructed under special survey to Lloyd's 100 A1 class "for towing services", and complies with the requirements of the Board of Trade in all respects and also the requirements of the Indian Government.

MACHINE TOOLS.

Twist drill point grinding machine.—A new motor-driven twist drill point grinding machine has recently been introduced by Messrs. A. A. Jones and Shipman Limited, East Park Road, Leicester. It is suitable for drills up to $\frac{3}{4}$ in. in diameter, and on it all angles and clearances are definitely produced by mechanical means, the result being a perfectly-ground drill point which can be formed repeatedly, thus ensuring correct cutting throughout the life of the drill. The same degree of accuracy is obtainable on all sizes of drill, down to the small wire-gauge drills of not more than 0·01 inch diameter, provision being made not only for varying the amount of lip clearance, but also for preparing the drills for the final pointing operation.

The machine is self-contained, the $\frac{1}{6}$ h.p. motor and control gear being mounted at the rear. The motor is adjustable for the purpose of tensioning the driving belt. The spindle is mounted on dust-proof ball bearings and carries a disc wheel for roughing as well as a cup wheel for the finishing operation. The roughing wheel is at the left-hand end of the spindle and is provided with a plain work rest. For the cup wheel at the right-hand end of the spindle a special work-holding frame is used and is designed to produce a double or compound rolling motion. The frame piece carries the whole of the mechanism for the compound motions, being pivoted by a swing bracket and adjustable on it to vary the angle of the drill point. To use the holder a gauge bar is set between centres on the frame. The latter is then set to the correct lateral position by adjusting the gauge in relation to the wheel face through the medium of an adjusting nut.

The next stage consists of setting to suit the drill diameter, and is done by placing the drill between the caliper jaws, the latter being controlled by a hand nut. Following this, the drill is placed in a holder with the cutting lip exactly parallel to a gauge line inscribed thereon. The holder is placed in a slide, and by swinging the hand lever, one of the lips is ground. The drill holder is steadied by hand during the process, and by turning it over the opposite lip can be ground in conformity with the first one. The drill-carrying member is coupled to the swing member by a connecting rod, the act of swinging the hand lever causing the member to tilt and to swing round in the main frame.

A knurled knob gives a vertical adjustment to the oscillating member whereby the lip or backing-off angle may be made more or less acute, and to adjust the drill towards the wheel it is only necessary to swing the pointer over a quadrant on the swing member. Movement of the pointer in a forward direction takes the drill towards the wheel, and both lips should be ground before the setting of the pointer is disturbed. A diamond trueing device is supplied with the machine, being fitted when required in a slot in the side of the wheel guard and applied to the face of the wheel by a sliding motion.

Fredk. Pollard & Co., Ltd., Corona Works, Leicester, are mainly occupied on drilling machines of special types for the motor industry and have recently developed a new range of electrically driven high-speed drilling machines. The machines are available in single up to 4-spindle in line types and are arranged for either gear-box or direct motor drive.

The Butler Machine Tool Co., Ltd., Victoria Ironworks, Halifax, have recently developed 8-inch and 12-inch stroke toolroom slotting machines of new design, in which all the movements can be guaranteed to a maximum error of 0·0005-inch. A tilting type body is fitted allowing for a forward and backward tilt of 10 degrees for use on taper work. The tool box, which is relieved on the return stroke, can be rotated to face front, side or back, and tools can be fixed in either the horizontal or vertical positions.

RESEARCH AND TESTING EQUIPMENT.

Metropolitan Vickers Electrical Co., Ltd., are well known throughout the world as manufacturers of electrical machinery and apparatus, but it is not so generally known that they manufacture a range of research and testing equipment for service in universities, scientific institutions, works laboratories and test rooms.

The equipment can be conveniently classified in the following six groups:—

> *Group 1.—Continuously evacuated demountable vacuum equipment.*—X-ray tubes for crystallographic analyses, cathode-ray oscillographs, vacuum furnaces.
>
> *Auxiliary vacuum equipment for use with the above.*—Oil condensation pumps, rotary oil sealed vacuum pumps, complete high vacuum pumping sets, Apiezon low vapour pressure distillates.

The products of Group 1 are the result of the development of a vacuum technique that has led to a rapid advance in all branches of science and engineering requiring the production and maintenance of very high vacua. Glass, rubber and similar laboratory materials have been practically eliminated, likewise liquid air and similar cold-traps.

> *up 2.—High Voltage research and testing equipment.*—Compressed air H.V. condensers for measurement, D.C. condensers, H.V. Schering bridges, precision H.V. voltmeters, sphere spark gaps H.V. D.C. testing sets, small H.V. testing transformers, H.V. impulse generators.

The equipment comprising Group 2 has been designed by specialists in high voltage engineering, not only for research work, but also for the testing of high voltage electrical plant under both factory and laboratory conditions.

> *Group 3.—Noise Apparatus.*—Noise Meters, portable sound analysers.

Group 3 comprises portable equipment that can be rapidly and easily operated for the purpose of estimating noise intensity and identifying the components of complex sounds.

> *Group 4.—Mechanical Testing equipment.*—Slow tensile and creep testing machines, precision six-unit creep testing apparatus, vibration fatigue and frequency testing apparatus.

Group 4 comprises equipment for slow tensile and creep testing at high temperatures, and apparatus for providing a rapid and reliable method of performing fatigue tests on machine parts or to determine their natural frequency of vibration, which have been evolved for the firm's own use and are now available to other users.

> *Group 5.—Electrical and Magnetic research and testing equipment.* Voltage transformer ratio and phase angle testing apparatus, average voltmeter for core loss testing, precision turns tester for coils, double resistance bridge, rotational accelerometer, sheet steel iron loss tester, B-H. magnetic test apparatus, oscillograph (portable four element), magnetic crack detection apparatus, fluid pressure apparatus for oscillographic recording.

This equipment has been developed to facilitate the testing of magnetic materials, for the improvement of the accuracy of testing methods, and is backed by the experience of the firm in the use and testing of a large range of magnetic materials and apparatus.

Group 6. Chemical apparatus.—Oil sludge testing equipment.

This equipment is for the testing of insulating and lubricating oils and is characterised by the method of ensuring a constant air flow through the oil.

Further particulars of any or all of the above-mentioned research and testing equipment can be obtained on application to the Company at Trafford Park, Manchester.

TEXTILES.

COTTON.

The American raw cotton market remains quiet, with prices fairly steady, and inclined to rise. Most dealers prefer to await some sort of action on the part of the U.S.A. Government. But whatever that action may be, the likelihood of its affecting the area of cotton planting is growing steadily more remote. Various increases in acreage are predicted, of from 5 per cent. to 10 per cent., and as the weather is now favourable planting is going on.

The Manchester piece-goods market is suffering from a lack of demand, so that many manufacturers cannot sell their output, and merchants are unwilling to give orders. A certain amount of trade is going on in the smaller markets, but not enough to compensate for the inactivity in India and China. Distributors in Calcutta are reported to have large quantities of cloth, especially Japanese, on their hands, of which they are unable to dispose. Some inquiry has been received from Madras for dhooties and mulls, and Amritsar has shown an interest in fancies and special makes. The demand from China shows little sign of improvement, but inquiry has reappeared for grey shirtings for Shanghai, in styles that have not sold for some time back.

Tanjibs have been sold for Egypt, mulls and other bleaching cloths for Persia and the Levant, and some lots of drills and shirtings for West Africa. Shippers to South America have been inquiring for plain finishing cloths and various specialities, but the resulting business has not been proportionate to the inquiry.

Exports of cotton goods in March showed an increase in yardage both on February, 1933, and on March, 1932: they were the largest for any month since May, 1930. The following table gives the figures, by classes, compared with those for February, 1933, and for March of last

(000's omitted.)

Yarns.	*March, 1933.*	*February, 1933.*	*March, 1932.*
	1,000 lbs.	*1,000 lbs.*	*1,000 lbs.*
Grey	11,205	10,531	12,487
Bleached and dyed	1,568	1,355	1,405
	sq. yds.	*sq. yds.*	*sq. yds.*
Piece-goods.	*1,000*	*1,000*	*1,000.*
Grey	38,141	33,894	34,440
Bleached	72,008	69,630	71,467
Printed	36,142	29,303	34,485
Dyed	53,752	51,655	50,992
Coloured	9,808	10,079	11,203
TOTAL	209,852	191,561	

WOOL TEXTILES.

Semi-manufactures.—The exports of wool tops during the first quarter of this year amounted to 117,607 centals of 100 lbs. compared with 114,875 centals of 100 lbs. and 70,943 centals in the corresponding three months of 1932 and 1931 respectively. Approximately 27 per cent. of this total was exported to Germany; Canada being the second most important market although her imports from the United Kingdom show a heavy decline from the two previous years. The quantities exported to the group of countries under the heading "other countries" have increased from 12,275 centals of 100 lbs. during January/March, 1931, to 27,606 centals in the corresponding months of this year. The exports of woollen (carded) yarns during the periods under review were 966,900 lbs. (1931); 1,137,700 (1932) and 1,709,600 (1933) and of worsted (combed) yarns 5,513,900 lbs. (1931); 7,708,900 (1932) and 7,239,000 (1933).

China was the best market for woollen (carded) yarns and "other countries" also show a large increase; the 1933 quantity being more than 2½ times that of 1931. Germany is by far the largest market for worsted yarns ough her imports from the United Kingdom have fallen from 2,873,800 lbs. in the first quarter of 1932 to 1,876,400 in the corresponding period of this year. The exports to Denmark exceeded half a million lbs.; the only other countries (other than Germany) to take upwards of half a million lbs. were the Irish Free State and Canada. The same tendency in the exports of worsted yarns to "other countries" is seen as in all semi-manufactures, these have increased from 856,100 lbs. in the first three months of 1931 to 2,273,500 lbs. in the January/March period of 1933. The export of mohair, alpaca and cashmere yarns, although greater in the first quarter of 1933 than in the corresponding quarter last year, are not up to the 1931 figure. Germany takes nearly 50 per cent. of these yarns.

Piece-goods.—Fewer mohair and alpaca tissues, furnishing fabrics and pile fabrics, also flannels, were exported during the first quarter this year than in the corresponding period last year, but the bulk trade in woollen and worsted tissues shows an upward tendency. The figures are as follows:—

	Three months ended 31st March.		
	1931.	*1932.*	*1933.*
	(Sq. yds.)	(Sq. qds.)	(Sq. yds.)
Woollen Tissues .	16,754,700	14,496,500	15,883,900
Worsted ,, .	9,055,800	8,101,100	8,811,500

By far the larger proportion of these exports are fabrics weighing under 12 ozs. per square yard. There have been significant increases in the export of woollen tissues to Denmark, Italy, Turkey, Egypt, United States of America, Argentina, South Africa, Australia and New Zealand, whilst Germany, Austria, Netherland, Belgium, China and Canada show heavy declines in their woollen imports from the United Kingdom. Greatly increased quantities of worsted tissues were exported to France, Turkey, Egypt, Japan, Columbia, Brazil, The Argentine, South Africa and India, and there were serious declines in the United Kingdom exports of worsteds to Norway, Germany, Belgium, The Netherlands, also to Greece, the Irish Free State and Canada.

It is interesting to note the value of the total exports of semi-manufactures and piece-goods which amounted to £6,893,084 in the first quarter of 1931 compared with £6,175,932 and £5,994,098 in the corresponding periods of 1932 and 1933 respectively.

LINEN

There has been a steady decline in the amount of flax offered in the Ulster markets. Many of the markets are now closed.

The demand for yarns is slow with rather more activity for finer qualities. Some Belfast mills have recently made considerable deliveries.

In the weaving end there is little improvement to report. The recent financial crisis in the U.S.A. is responsible for a slight decline in the export of linen piece-goods to that country in March. During that month, piece-goods to the value of £146,833 were exported to the U.S.A., as compared with £175,213 in March, 1932. Piece-goods exported to China in March amounted to 344,300 square yards as against 113,500 square yards in March, 1932. The official export figures indicate that the Latin American trade has shown a change for the better, while Canada has definitely improved her position as a customer for Irish linen. There has been a slight improvement in the European market, but on the other hand a falling off is noticeable in the Australasian trade.

The value of linen goods imported into the United Kingdom in March was £20,156 as compared with £30,090 in March, 1932, and £53,885 in March, 1931.

The value of linen goods exported from the United Kingdom in March was £485,619 as compared with £520,266 in March, 1932, and £433,500 in March, 1931.

The total values of linen goods exported during the three months ended March 31st, 1931, 1932, and 1933, were respectively £1,382,391, £1,388,809, and £1,351,037, and the quantities of linen piece-goods exported during the same periods were 16,139,800, 19,161,100, and 19,771,900 square yards.

AUTOMOBILE AND ALLIED TRADES.

MAKING A GOOD START.

The United Kingdom Motor Industry saw the close of 1932 with justifiable feelings of satisfaction at progress made, and with an optimistic outlook as to future possibilities. It had witnessed its exports increase during the year by no less than £700,000, and had reason to feel that its struggle to rehabilitate itself in the Motor Markets of the World was at last bringing definite results.

The present year therefore opened with United Kingdom Manufacturers facing the future with confidence and determination to leave no stone unturned to place their Industry in a position of pre-eminence and January saw the advance continued. With the figures available for the first quarter of 1933, it is apparent that the progress made in that period is by no means insignificant. United Kingdom motor exports for the first quarter of the current year were valued at £2,556,374, the highest total for the first quarter of any year since 1927. For the corresponding period of 1932, the total was £1,645,855. During the first three months of 1933 the number of cars exported has reached 10,241 (value £1,295,215) whilst for the same period last year, the figures were 6,600 (value £808,455). Commercial Vehicles, Chassis, and parts have also shown substantial increases.

Although the number of cars imported during the opening months of this year have increased, the total gross Imports of Motor Products continue to decrease, the figures for the period under review being £532,585 as compared with £740,977 for the corresponding period of 1932. Thus the excess of Exports over Imports continues to present a most encouraging feature, being for the quarter no less than £2,023,789. When compared with £904,878 for the corresponding period of last year, the degree of progress can be the better gauged.

From all parts of the World come reports of the steady progress being made by the Motor Vehicle of United Kingdom manufacture. In Ceylon, for example, out of some 14,000 vehicles on the road at the end of 1932, over 5,000 were of British origin, while the figures for new registrations there during the last quarter of 1932 show that, of 286 cars registered, 258 (or 90 per cent.) were British.

One Manufacturer reports that for the first seven months of his present season his percentage increases have risen by 64 per cent. in North Africa and West Asia; by 62 per cent. in Europe, and by 24 per cent. in the Far East.

Altogether, a most promising start, and one that should lead to even greater progress in the future.

More Motor Successes.

Ninety-eight of the fastest motor-cars in Europe were prepared for the thousand-mile race over Italian roads for the Mille Miglia Cup, one of the most prized trophies in the motoring world, early in April. The race took place before what was probably one of the largest audiences in the world, and every competitor strained every nerve to win. The British success was therefore one to be proud of. Two super-charged M.G.12 horse-power "Magnettes" gained first and second places in the 1,100 c.c. class. The first covered the 1,000 miles at an average speed of 56·90 miles per hour. They beat last year's speed record; and the M.G. Magnettes were also awarded the team prize.

For a long time the small car was looked at askance by foreign buyers. It was not believed that their small engines could develop much power, and they were passed over in favour of larger cars. The true merits of the United Kingdom light car were better recognised when the general need for economy compelled car users to investigate them more closely. The results surprised many people and sales abroad increased considerably. United Kingdom manufacturers promptly seized upon their opportunities, and they improved their cars still further. This year's models of small cars of United Kingdom manufacture surpass those of all other years in value, efficiency, safety, ease of control, appearance, and equipment, and the demand for them overseas grows steadily.

RESEARCH WORK IN THE UNITED KINGDOM RUBBER INDUSTRY.

(*By a Special Correspondent.*)

Research in individual rubber factories has many disadvantages, *e.g.*, its slowness, wasteful duplication from factory to factory, and absence of opportunity for exchange of ideas among research workers; it is also expensive. While every firm must have problems relating to its own processes and products requiring scientific investigation on the spot, a good case can be made out for prolonged team-work in a central association on many problems of vital importance in connection with basic raw materials, fundamental mechanism of the manufacturing processes, the properties of the finished products, methods of testing, and the like. Work of this kind brings benefit to the industry as a whole by raising the standard of the industry, eliminating inferior products and methods, and giving a guarantee of the efficiency of the industry. In fact a central research association stands as a symbol for the consumer and the general public that the industry is striving its utmost to keep abreast of progress and to render the best possible service that science can provide.

It is work of this kind which has occupied the attention of the Research Association of British Rubber Manufacturers during the thirteen years of its existence. Many fundamental raw materials have been examined in detail with a view to suggesting the best types and conditions of use. A long series of proposed new materials—types of rubber, forms of sulphur, zinc oxide, silica, new accelerators and anti-oxidants—has been examined and criticised. The educational value of work of this sort in enabling firms to become aware and take advantage of new advances is difficult to measure. Not a few United Kingdom rubber manufacturers have made their first acquaintance with the indispensable value of accelerators and anti-oxidants in this way, and no member has any excuse for failing to improve his goods by the use of such agents.

Lengthy fundamental researches have been done on ageing and on the deterioration of rubber in oils, and practical improvements have been suggested in resisting such changes. Another important aspect of co-operative scientific work lies in the development of testing methods and instruments, and the Association is responsible for numerous important contributions in this field, including work on various mechanical tests which affect all rubber goods, on water absorption which is of fundamental importance in electrical insulation and footwear, and on electrical testing. The Association's new form of electrode for rubber, for example, is now adopted by both the British Standards Institution and the American Society for Testing Materials.

Work on finished products has related to tyres and inner tubes, hot-water bottles, soles and heels, packings, and ebonite. Fruitful collaboration with large consumers, such as the Admiralty in connection with cables and the Electrical Research Association on ebonite, has enabled lengthy expensive researches to be undertaken hitherto impossible for the rubber industry alone. Much work has been done, also, for the British Standards Institution in establishing reliable quality specifications.

The Research Association acts also as a liaison agent with other Institutions and concerns interested in rubber, as for example the Rubber Growers Association, the Rubber Research Institutions in Malaya, Ceylon, and various foreign countries, the Rubber Trade Association of London, the Association of British Chemical Manufacturers, and similar bodies.

Parallel with its research activities the Association lays great stress on the development of organised rubber intelligence services. The day of the individual search for information has passed and with thousands of scientific periodicals appearing regularly no man can hope to keep abreast of published information, however limited his field, without specialised aid. Organised information centres, devoted to the information of single subjects, are the only rational solution of this problem and in fact special libraries and information bureaux are being developed in every industry.

The Rubber Research Association Bureau has fitted itself to be a link in such a network.

Another important service is the regular publication of a Summary of Current Literature, containing some 600-700 abstracts of rubber literature every month, running to about 800 pages per year. It is only with a digest of this kind that the business man and works' technologist can keep in touch with current progress and take advantage of new discoveries.

The Bureau issues also a series of circulars, in effect monographs of special subjects, which thoroughly exhaust existing knowledge from the chaos of literature and present complete pictures of their subjects.

ELECTRICITY'S ADVANCE IN THE UNITED KINGDOM.

(*By a Correspondent.*)

According to information and statistics recently published by the Central Electricity Board, the United Kingdom is now the third country in the world as far as the production of electricity is concerned. This is a substantial achievement. For a long time the United Kingdom lagged behind many other nations in this regard. Indeed, per head of population, some of the smaller countries were the most progressive in the utilisation of electricity. This late development was not due to any lack of enterprise or a non-realisation of the great possibilities of electric power and light; it was due to a number of other causes arising out of her peculiar position.

Modern industrialism was built up on steam, and the many inventions which made steam power available were British inventions. The United Kingdom was also extremely fortunate in its huge deposits of first-class coal, which helped to establish its industrial supremacy last century. Then one of the derivatives of coal is gas, so naturally the country built up its whole system on coal and gas as sources of power and light. It was therefore natural that United Kingdom manufacturers and public authorities, with their enormous plant of all descriptions, made the most of the sources of power at their disposal and left electricity to develop at a slower rate.

This is not to say that electricity was definitely neglected from either a scientific or a commercial point of view—we need only mention the name of Faraday, to whose fundamental discoveries in this field the world owes so much, to remind one that here again British invention and enterprise have benefited the world—but until comparatively recently there was no spectacular advance. Then came the formation of the Central Electricity Board in 1927, and the preparation of a national plan. A national network of lines, popularly known as "the Grid", for the transmission of electrical energy at high tension, was designed, so as to link up the best and most economical generating stations in the country and transmit the current "wholesale" to the various distributive undertakings.

The work of construction of the Grid has been carried out with remarkable rapidity, and is not far from completion. Of the 273 transforming and switching stations, 244 have been finished. The Grid itself is now operating with almost complete reliability over 2,000 miles of line in commission, one of the greatest technical achievements during the present century. When completed the Grid will comprise "approximately 3,000 miles of primary transmission lines, operated at 132,000 volts, linking up selected station with one another and with the systems of other authorised undertakings in the areas, and interconnecting the areas themselves. In addition, there are approximately 1,000 miles of secondary lines operated at 66,000 or lower voltages".

As indications of the large scale of the Grid, the following details are published by the Board. There are over 26,000 transmission towers and 273 transforming and switching stations, with a total transforming capacity of 11,000,000 horse-power. The 26,000 over-head towers, in addition to the steel wire in conductors and the steel work in the switching and transforming stations, give a total of more than 150,000 tons of high-grade steel, one of the most highly finished products of the steel industry. There are about 12,000 tons of aluminium: half a million tons of cement; and so far over one hundred thousand men have been employed on the work. Since the work began the Board have had to negotiate with more than 21,000 owners and occupiers of land for "wayleaves" for the construction of towers, etc., and in less than 600 cases have they had to seek compulsory powers. The cost of constructing the Grid itself will amount to about £26,700,000.

In some areas industrial concerns have already taken advantage of the recent electrical developments to re-design their factory plants for the greater use of the facilities now at their disposal, and from every point of view the country can congratulate itself on the results achieved. Furthermore, the greater demands for electrical apparatus of all descriptions are developing the ancillary trades and incidentally giving work to many who would otherwise be unemployed.

CATALOGUE LIBRARY.

The undermentioned catalogues relating to United Kingdom manufacturers have recently been received and may be consulted by *bonâ fide* firms or individuals at the Office of His Majesty's Senior Trade Commissioner in India, Fairlie House, Fairlie Place, Calcutta.

Names and Addresses.	*Description.*
***The Lanchester Motor Co., Ltd., Sandy Lane, Coventry.**	**Motor Cars.**
The Daimler Co., Ltd., Export Department, Daimler Works, Coventry.	**Motor Cars.**
Chance Bros. & Co., Ltd., Smethwick, Birmingham.	**Lighthouse Apparatus and Aerial Lighting Apparatus including Optical Apparatus and Burners.**

Names and Addresses.	*Description.*
*The Brooke Tool Manufacturing Co., Ltd., Warwick Road, Greet, Birmingham.	Machine Tools, etc.
*The Steel Co. of Scotland, Ltd., 37, Renfield Street, Glasgow, C. 2.	Steel.
*A. Reyrolle & Co., Ltd., Hebburn-on-Tyne.	Metal and Switchgear.
Spartan Aircraft Ltd., Cowes, Isle of Wight.	Spartan Aeroplanes.
*Parsons Oil Engine Co., Ltd., Town Quay Works, Southampton.	Oil, Petrol and Paraffin Engines, Pumps, Gear, etc.
Dictograph Telephones Ltd., Aurelia Road, Croydon, Surrey.	Dictograph House Telephone System.
Kerner Greenwood & Co., Ltd., King's Lynn.	"Pudlo" brand cement Waterproofing Powder.
The Phœnix Engineering Co., Ltd., Phœnix Works, Chard.	Tar Boilers, Bitumen, Heating and Spraying Machines, Rock and Mastic Asphalt Heaters, Mixers, High Capacity Hand and Power Pumps, Municipal Plant and Appliances.
*A. & W. Smith & Co., Ltd., Eglinton Engine Works, Glasgow.	Cane-sugar machinery, Crushing Plant, Evaporating and Condensing Plant.
A. Gallenkamp & Co., Ltd., 17-29, Sun Street and 1-3, Clifton Street, Finsbury Sq., London, E.C. 2.	Scientific Apparatus and instruments for Educational purposes.
Henry Hughes & Son, Ltd., 59, Fenchurch Street, London, E.C. 3.	"Husun" Nautical, Aeronautical and Drawing Instruments. Yacht and Motor Boat Compasses, Fittings and Accessories. Signalling Apparatus. Echo Sounding Apparatus.
*Guthrie Allsebrook & Co., Reading.	Deep-Bore Pumps.

* Catalogues marked with an asterisk have also been received in the Office of His Majesty's Trade Commissioner, 3, Wittet Road, Ballard Estate, Bombay, where they may also be consulted by *bonâ fide* firms or individuals.

In addition, His Majesty's Trade Commissioner, Bombay, has recently received the undermentioned catalogues:—

Names and Addresses.	*Description.*
The Austin Motor Co., Ltd., Longbridge Works, Birmingham.	Motor Cars.
Whitefields Ltd., Greengate, London, E. 13.	Chocolates, Toffees, Fruit Boilings, etc.

TRADE ENQUIRIES.

The names of the United Kingdom firms referred to in the enquiries mentioned below will be furnished to reputable firms on application to His Majesty's Senior Trade Commissioner, Post Box No. 683, Fairlie House, Fairlie Place, Calcutta.

No. 105-33.

A United Kingdom firm manufacturing Sanitary Fireclayware wishes to appoint agents in Calcutta, Madras and Rangoon.

No. 542-33.

A United Kingdom firm, who have recently purchased the rights of a new patented Wood Preservative, are desirous of appointing agents in this area. The firm have in mind an arrangement whereby the representatives would act as Buying Agents but they are prepared to consider other forms of representation according to the circumstances.

No. 560-33.

A Bradford firm supplying Shoddy, and certain wool yarns, are desirous of getting in touch with a firm or individual in Calcutta, who would undertake their representation on a commission basis.

MGIPC—L—103HMTC—31-5-33—1,050.

H. M. TRADE COMMISSIONERS IN INDIA.

Calcutta—

Sir Thomas M. Ainscough, C.B.E.,

His Majesty's Senior Trade Commissioner in India and Ceylon.

Mr. R. B. Willmot,

His Majesty's Trade Commissioner at Calcutta.

Post Box No. 683, Fairlie House, Fairlie Place.

Telegraphic Address.—" Tradcom, Calcutta."

Telephone No.—" Calcutta 1042."

Bombay—

Mr. W. D. M. Clarke,

His Majesty's Trade Commissioner at Bombay.

Post Box No. 815, 3, Wittet Road, Ballard Estate.

Telegraphic Address.—" Tradcom, Bombay."

Telephone No.—" Bombay 23095."

Ceylon—

Imperial Trade Correspondent,

The Principal Collector of Customs, Colombo.

With Compliments.

JUNE 1933

The
Commercial Bulletin

A Monthly Review of Official and other
announcements relating particularly
to British Export Trade

Issued by
HIS MAJESTY'S SENIOR TRADE COMMISSIONER
IN INDIA AND CEYLON.

FAIRLIE HOUSE,
FAIRLIE PLACE,
CALCUTTA.

CONTENTS.

PAGE.

GENERAL 1
FINANCE 2
CONTRACTS SECURED 3
IRON AND STEEL 5
FIRE DETECTION 6
MACHINE TOOLS 6
AUTOMOBILE AND ALLIED TRADES 7
TEXTILES 8
POTTERY 12
WIRELESS 14
CANNING INDUSTRY 14
THE UNITED KINGDOM SCIENTIFIC INSTRUMENT INDUSTRY . 15
CATALOGUE LIBRARY 19
TRADE ENQUIRY 21

GENERAL.

A comparison of the current overseas trade returns with those of last year is once more rendered difficult by the variation in the date of Easter, this festival a year ago falling in March. It is, therefore, not surprising that a contraction should have occurred in this April's figures in all sections of the returns, but the falling off is greater in exports than in imports. Taking, however, a daily average based on the number of working days the figures for the month show little change.

Total imports during April were valued at £51·1 million, being £5·2 million less than in the previous month while exports of United Kingdom produce and manufactures amounted to £26·4 million, as compared with £32·6 million in the previous month.

The decrease in imports is accounted for by a reduction of nearly £2 million in food, drink and tobacco and of over £1 million in raw material. The decline in the value of exports was due almost entirely to a decrease in respect of articles wholly or mainly manufactured.

The excess of imports over exports of merchandise last month was £21·2 million as compared with £20·7 million. £16·7 million and £19·8 million in January, February and March. For the first four months of this year, the excess of imports was £78 million as compared with £99 million in the corresponding period of 1932.

FAVOURABLE TREND IN EMPLOYMENT.

The steady improvement in general conditions in Great Britain is reflected in recent unemployment returns. During April there was a decrease of 78,550 in the number of registered unemployed. Altogether it is estimated that there were 91,000 more persons in employment than in March. If we take the figures for the first three months of the year, the results are still more satisfactory; they provide evidence that there is more available employment than there has been since November, 1930, with the single exception of the month of December, 1931, when there was exceptional activity towards Christmas.

The two big industries which have not shared in the general revival are the coal and cotton industries. In the case of coal, this is to some extent due to seasonal causes; but there has been a definite relapse in the cotton industry throwing 21,000 persons out of work. On the other hand, conditions in nearly every other quarter have improved. The most marked revival is in the building industry, which has absorbed 124,000 more workers. General engineering is employing 13,000 more men than at the end of January; the motor industry 4,000; and shipbuilding and marine engineering 7,000.

FINANCE.

NEW COMPANIES.

London Mart for Empire Trade.—It is announced that a company, registered as Hereford House, Ltd., has acquired on a 200 years' lease from the Duke of Westminister the big building at the Marble Arch formerly in the occupation of Gamages (West-End), Ltd.

The necessary capital of the company has been subscribed by the following six insurance companies: The London Life Association—Scottish Widows' Fund and Life Assurance Society—Equitable Life Assurance Society—National Provident Institution—National Mutual Life Assurance Society—Provident Mutual Life Assurance Association. Well-known men in industrial circles will form the directorate, under the chairmanship of Mr. Harold M. Trouncer, of the London Life Association.

It is proposed to utilise the building for the purpose of establishing a wholesale buying centre for home and Empire products.

AMALGAMATIONS.

Neon Lights.—A fusion of interests has taken place between David Allen Neon Displays and Claude-General Neon Lights. The latter company is an associate of the General Electric Company.

In future the whole of the manufacture and erection work required for both undertakings will be carried out by Claude-General Neon Lights from its Wembley factory.

David Allen Neon Displays is a subsidiary company of David Allen and Sons Billposting. The former will in future devote its energies to the development of the Neon "site" business, which links up closely with the activities of the parent company.

Footwear Amalgamation Reported.—It is reported that the registration of the Shoe Trade Development Company is the first step in a plan to effect a big merger in the footwear industry. The company has been registered with a capital of £3,000, but it is believed that eventually a much greater capital will be involved. The first directors are: Sir John Shelley (chairman), Lord Stopford and Mr. F. W. Roberts. It is understood that the company contemplates the owning of a chain of 2,000 shops throughout the country. It is also proposed to put forward a scheme for the rationalisation of the shoe trade, the company undertaking the manufacture of footwear for direct sale through its own shops.

In addition, it is claimed, with the home chain completed, steps will be taken to enter other countries in the Empire. Assembling plants will, it is stated, be erected in various countries and shops will be opened to dispose of the goods imported from Great Britain and assembled on the spot.

Increases in Capital.

	£
East Rand Consolidated, Ltd.	500,000
Bakelite, Ltd., Moulding Manufacturers	59,900
W. Edwards and Son (Bridport), Ltd., Twine Manufacturers	37,900
Central Portland Cement Company, Ltd.	125,000
Charrington and Company, Ltd., Brewers	2,008,313

CONTRACTS SECURED.

ORDERS FROM EGYPT.

A contract to supply the Egyptian State Railways with 18,000 tons of washed sized coals has been awarded to the Maris Export and Trading Company.

J. W. Gibson has secured from the Egyptian Government the contract for building the Gebel Awlia Dam, a few miles south of Khartoum. Their tender of £Eg.2,078,086 was the second lowest. Four firms, all British tendered for the contract. It is estimated that the building of this dam which will take four years to complete will increase Egypt's cultivable land by 300,000 acres.

Among other contracts awarded are the following:

	£
Messrs. T. Beynon & Co., Ltd., Cardiff. Supply of 169,500 metrical tons Welsh coal . . .	206,900
Messrs. Lindsay Blee & Co., Ltd., London Supply of 60,500 metrical tons Welsh coal .	73,200

United Kingdom Motor Cycles for Overseas.

Within a week the B.S.A. Company has received orders for large batches of motor-cycles from three far distant countries—namely, Hong Kong, the Sudan and Australia. The machines for Australia are required by the Post Office, and those for the Sudan for Government use. The consignment for Hong Kong is to be divided between the Volunteer Defence Corps and the Hong Kong Police.

Merryweather & Sons, of Greenwich, the pioneers of motor fire engines and turntable ladders, have just constructed for Hong Kong Fire Brigade one of their all-British motor turntable fire escapes. The machine is entirely of United Kingdom design, material and workmanship and is the first United Kingdom motor turntable fire escape to be constructed with all-steel ladders.

INDIA.

Messrs. C. A. Parsons, Ltd., Newcastle-on-Tyne, have received a contract for a 4,000 KW. steam turbine with alternator and condensing plant for the United Provinces Electricity Supply Company of Lucknow.

The East India Railway have placed an order with Vulcan Foundry Co., Ltd., for 56 locomotive boilers.

SWEDEN.

British Aircraft Order.—For the aircraft carrier now under construction for the Swedish Navy an order has been given for Hawker " Osprey " two-seater fighter aircraft. These are to be fitted with Bristol " Pegasus " air-cooled engines manufactured in Sweden under licence from the United Kingdom firm.

The aircraft are to be made in England. The Hawker Co., are also building " Hart " day bombers for the military section of the Swedish Air Force.

POLAND.

Orders have been received for the following:—

L. B. Holliday & Co., Ltd., £2,700—10,000 Kgs. of centralite.

A. Boake Roberts & Co., Ltd.—7,500 Kgs. of butyl alcohol.

BRAZIL.

Railway carriage bodies for Brazil.—The Gloucester Railway Carriage and Wagon Company has received an order for three steel car bodies for the Diesel rail car unit train being built by Sir W. G. Armstrong Whitworth and Co., for the São Paulo Railway.

IRON AND STEEL.

The National Federation of Iron and Steel Manufacturers reports that there were 69 furnaces in blast at the end of April, which is one less than at the beginning of the month. The production of pig iron in April amounted to 324,700 tons as compared with 332,200 tons in March.

Imports of pig iron into the United Kingdom in April were almost entirely from India. Foundry pig iron from India accounted for 3,160 tons out of 4,148 tons from all sources, while the importation of 4,200 tons of basic pig was exclusively from that source.

The output of steel ingots and castings in April amounted to 513,300 tons compared with 577,700 tons in March. The decline is due to the Easter holidays occurring in April.

The total export of iron and steel material from the United Kingdom in April amounted to 132,847 tons as compared with 154,971 tons in March. The decrease here is also largely attributable to the incidence of the Easter holiday. The figures of most of the principal items are lower, but the fall in the export of tinplates from 42,773 tons to 27,719 tons is unusually heavy. Inquiries for tinplates, however, have improved both in the home market and from overseas markets, and the indications are that this trade, which has suffered less than any other branch of the iron and steel industries, will maintain its position.

Exports of the following materials showed increases, steel tubes with a figure of 16,491 tons compared with 13,145 tons, and railway material, the latter due to heavy consignments of new rails to South Africa. Trade in certain lighter products, such as nails, screws, bolts, stoves, baths, etc., is also showing small but satisfactory improvement.

FIRE DETECTION.

FIRE DETECTION.

Considerable interest centres round the fire protection equipment which is to be fitted on the new Burns Philp motor liner, the " Malaita ", now building at the Barclay Curle & Co.'s Clydeholm Shipyard in Glasgow.

Particular importance is attached to this ship as she is the first unit to be built in accordance with the new Safety of Life at Sea requirements, and, in consequence, must comply with the new regulations for fire protection.

The type of equipment to be fitted is being supplied by the successful tenderers, Messrs. Automatic Light Control, Ltd., of London, the designers and manufacturers of the A.L.C. system.

In view of the fact that indication of fire is given either by sound, sight or smell and the system in its operation is entirely automatic, it is generally regarded as fulfilling the requirements of the Act to the fullest possible extent.

The contract for the equipping of the system has been secured by Messrs. Engineering Marketing Services of London, who are the sole marine agents for the A.L.C. system.

MACHINE TOOLS.

Tube Screwing and Cutting-off Machine.—Messrs. Kendall & Gent (1920), Ltd., Victoria Works, Gorton, Manchester, have recently introduced a machine suitable for screwing and cutting-off any length of straight tube from $2\frac{1}{2}$ inches to 8 inches diameter such as is used in pipe line work. The tubes, when passed through the spindle, are gripped by four hardened steel chuck jaws, operated by hand-controlled toggle levers, without stopping the machine. The die-head, carrying six tangential chasers in steel die-holders, is mounted on the carriage. The die ring is graduated so that adjustment can be quickly made for varying diameters of tubes having the same pitch of thread.

Front and rear cutting-off rests are arranged at the right hand side of the carriage, with hand adjustment to and from the centre of the machine. A trimming tool is also arranged on the front rest for finishing off the ends of the tubes. Both hand and power movements are provided for the carriage along the bed, the latter motion being by clamp nut and guide screw.

The drive is by a constant speed motor through endless V-ropes to a 9-speed gear box. The nine spindle speeds are controlled by the two levers at the front of the head. A special motion is provided for screwing taper threads. This gives a positive taper and can be instantly engaged and disengaged as required. A special turning slide for turning the tubes before screwing forms part of the equipment.

Kitchen & Wade, Ltd., Arundel Street, Halifax, recently constructed a machine for one of the home railway companies for reaming the taper holes in railway sleeper chairs. There are four spindles, and these are so arranged in conjunction with the setting pieces on the table that 95-lb. crossing chairs with four reamed holes can be reamed at a maximum output of 57 per hour.

John Lund, Ltd., Eastburn Works, Cross Hills, Keighley, are receiving a fair number of enquiries for their new vertical spindle surface-grinding machines, and their internal and external cylindrical grinding machines. Light-type vertical spindle machines of various capacities are also in progress. All these machines have hydraulic movements and are operated by push buttons.

AUTOMOBILE AND ALLIED TRADES.

The record of progress which for some time it has been possible to ascribe to the United Kingdom Motor Industry continues, and in both the Home and Export Markets the general position is encouraging.

Exports of Cars from Great Britain during the four months to the end of April amounted in number to 12,819 value £1,631,122 as compared with 8,771 value £1,082,576 for the same period last year. Commercial Vehicles and Chassis also show an increase in the number exported during this period.

The export position can be said to be distinctly encouraging. From all markets reports are received of the progress being made by the United Kingdom Motor Vehicle, and an interesting example of this progress may be mentioned. During the past four years British Car Sales in South Africa have increased from 7 per cent. to 45 per cent. of the total imports. The improvement noticeable in European Markets is also a cause for satisfaction.

Although Imports of Cars during the first four months of the year have tended to increase, the total of Gross Imports of Motor Products continues to decrease, being £723,157 as compared with £1,032,025 for the same period last year.

TEXTILES.

COTTON.

Raw cotton prices appear to be rising steadily, but this has had as yet little influence on the prices offered for manufactures. It is to be feared that until the American exchange finds its level, and until the results of the World Economic Conference become known, any improvement in prices will be short-lived.

Enquiry in cloth for abroad has expanded considerably, but has not been followed by an increase in sales of cloth. Sales of yarn, on the other hand, have been larger than of late. Offers from India continue to be too low to be accepted, more especially as manufacturers' prices have risen to meet the increased cost of raw material. Some interest has been shown in dhooties for Calcutta and occasional sales have been made, while mulls have been in steady request for Madras and Karachi. The demand from China has not improved, owing partly to fluctuations in the price of silver early in May, but news of the latest Shanghai piece goods auction, at which larger quantities were offered for sale than have been of late, suggests that an increase will soon occur.

The outlook for South American trade is brighter, and a steady demand has been felt from the Argentine for printing and finishing cloths. Similar goods have been in request for the Scandinavian market, and muslins and fine goods have sold well to Switzerland.

The demand for yarns has improved generally, and spinners have been able to maintain their higher quotations. Fine counts in fair quantities have been sold to Germany and the Continent generally, though American yarns for home consumption have been rather erratic.

Exports of cotton goods in March were larger than for any month in the last two and a half years, and a set-back in April was perhaps not unexpected; but in no item save yarns were exports so much below those for April last year as might have been expected in view of the incidence of the Easter Holidays. The following table gives the figures for the month:—

	April, *1933.*	March, *1933.*	April, *1932.*
Yarns.	*1,000 lbs.*	*1,000 lbs.*	*1,000 lbs.*
Grey	7,990	11,205	12,086
Bleached and dyed	1,354	1,568	1,792
Piece Goods.	*1,000 sq. yds.*	*1,000 sq. yds.*	*1,000 sq. yds.*
Grey, unbleached	30,003	38,141	33,950
Bleached	60,060	72,008	72,350
Printed	28,795	36,142	34,596
Dyed in the piece	44,392	53,752	48,994
Dyed in the yarn	8,009	9,808	9,397
Total Piece Goods	171,209	209,852	199,286

WOOL.

Raw wool, tops and yarns.

Messrs. H. Dawson, Sons & Co., Ltd., the well-known wool brokers commenting on the wool outlook at the opening of the third series of London wool sales, when prices appreciated 5 per cent. to 10 per cent. compared with the closing March values (this increase has since been more than maintained) state:—

> " . . . . . The offerings at the present series give a true indication of the general position.

Merinos are found only in small proportion, while there are large offerings of New Zealand and South American wools. The advance registered to-day is only a moderate one, and it is quite possible that with the closing up of the overseas markets, fine grades may continue to harden rather than otherwise.

"The position of crossbreds is affected by the abnormally large proportion offering at this series, but these grades should be beneficially helped by the hardening values in fine sorts. . . .

"The second contributory factor, which is less reliable as a permanent one, is undoubtedly found in the U.S.A. inflationary policy. Its aim to raise the values of all basic commodities is already having its effect in the U.S.A. and some repercussion will undoubtedly be felt in European markets. The re-entry of American buying power may probably give the desired upward movement in world markets. It is not wise to expect too rapid an improvement. . . . The action of the top-makers' combine in advancing the tariff rates for combing of wools is announced to come into effect on 1st July and will automatically appreciate values. There is naturally a rush to get tops combed before 1st July, and wools will be purchased in the current series in order to provide for combing turns prior to the advance in rates.

"The wider effect may be salutary. It is really the first definite attempt to raise conversion costs, and to secure an adequate remuneration for their services. It may prove to be the forerunner of a similar movement in other branches. If it impels some protective policy in the spinning section, with a control over redundant machinery, its effect on the whole industry will be beneficial. Yarns and cloths are, however, still subject to a severe price cutting competition, and these sections are not so strongly organised, but an impetus has been initiated."

The wool combers have already taken steps to deal with redundant machinery, having formed a mutual association for the purpose of buying and dismantling obsolete mills and plant.

There is a steady turnover in fine tops and some good business has recently been booked in yarns, and prices are advancing.

Piece Goods.

The upward tendency which has recently been noticeable in the export of woollen and worsted tissues is maintained in the latest export figures for the four months ended April, 1930, one million three hundred thousand square yards more being exported this year than in the corresponding period of last year, and the total is only 637,000 square yards less than the quantity exported in the first four months of 1931.

Some development is taking place in the direction of printing light-weight wool fabrics in the piece. These cloths can be put to a wide variety of uses ranging from men's ties to dress goods and dressing gowns and they offer manufacturers opportunities for obtaining novelty effects at low cost.

LINEN.

The Northern Ireland Ministry of Agriculture reports that owing to the very low prices obtained this year for potatoes and oats farmers have, in many cases, resumed the growing of flax, and for the first time in several years an increase in the acreage under the crop is expected. Practically all the 1932 crop is now disposed of and very little Northern Ireland flax was offered for sale last month.

The activity in fine yarns reported last month continues and has even increased. As a consequence prices are firmer and full-time has been resumed in some mills. Business in the coarser yarns is still poor.

There has been some improvement in the weaving end, although, in spite of the lowness of stocks, buyers influenced by the instability of the exchanges remain hesitant.

Trade with the United States is still suffering from the decreased purchasing power of the dollar. In April last the value of exports of linen piece goods from the United Kingdom to the United States of America was £95,017 as compared with £155,031 of similar goods exported in April, 1932. A very considerable falling off in exports of linen goods to Cuba and British South Africa, also occurred. On the other hand there was despatched to China and Brazil a very much greater quantity of linen piece goods than in April, 1932.

The value of linen goods imported into the United Kingdom in April was £26,658 as compared with £26,943 in April, 1932, and £59,443 in April, 1931.

The value of linen goods exported from the United Kingdom in April was £400,687, as compared with £531,977 in April, 1932, and £441,375 in April, 1931.

The total value of linen goods exported during the four months ended 30th April, 1931, 1932 and 1933, were respectively £1,823,766, £1,920,786 and £1,754,724, and the quantities of linen piece goods exported during the same period were 21,961,300, 26,804,800 and 25,354,500 square yards.

POTTERY AND GLASSWARE.

There is no change of any consequence to record in the conditions prevailing in the pottery industry.

Information recently published in regard to unemployment in the industry in the "Potteries" area (on the basis of 62,000 pottery workers employed in the area) indicates that on March 20th, 1933, 6,611 were totally unemployed and 11,259 temporarily stopped, a total of 17,780 or 28·82 per cent. Comparative figures quoted were:

December, 1932	18,772	30·27 per cent.
September, 1932	15,651	25·24 ,, ,,
June, 1932	20,702	33·39 ,, ,,
March, 1932	16,446	26·52 ,, ,,
April, 1931	19,838	31·99 ,, ,,
April, 1930	12,179	19·64 ,, ,,
April, 1929	6,936	11·18 ,, ,,
April, 1928	5,699	9·19 ,, ,,

Following are details of the total quantity and value of the exports of pottery of all classes (excluding bricks) for the first four months of this year, with comparative figures for the two preceding years.

	Quantity cwts.	*Value* £
January to April, 1933	725,136	843,212
,, ,, ,, 1932	828,372	931,885
,, ,, ,, 1931	1,095,366	1,126,012

The following statement gives details for each section of the industry:—

Section.	*Value of Exports.* *1933.* £	*1932.* £	*Decrease.* £	*Percentage of decrease 1933 compared with 1932.*
Tiles (all classes) .	62,273	70,092	7,819	11·2
Sanitary ware .	181,519	206,957	22,438	10·8
Chinaware .	51,498	57,388	5,890	10·3
Electrical porcelain . .	18,529	33,102	14,573	44·0
General earthenware . .	131,164	147,190	13,026	3·0
Stoneware . .	7,310	11,764	4,454	38·0
Refractory goods and clay products not elsewhere specified	84,919	105,392	20,473	19·4
Total .	843,212	931,885	88,673	9·5

The following table deals with the various export markets for the periods in question:—

	Value of Exports. *1933.* £	*1932.* £	*Inc. or Dec.* *Inc.* £	*Dec* £	*Inc. or Dec. per cent. over 1932.* *Inc.*	*Dec.*
Canada . . .	153,587	185,414	—	31,827	—	17·2
United States . .	84,846	95,525	—	11,179	—	11·7
Irish Free State . .	65,419	84,863	—	19,444	—	23·0
Australia . . .	64,300	46,036	18,264	—	30·7	—
Argentina . . .	51,898	48,275	3,623	—	7·5	—
Brazil	44,542	21,444	23,098	—	107·7	—
South Africa . . .	43,612	63,873	—	19,761	—	31·2
India	35,563	47,890	—	12,327	—	25·7
New Zealand . .	25,232	30,640	—	5,408	—	17·6
France . . .	9,272	11,857	—	2,585	—	21·8
Other countries . .	265,441	296,568	—	31,127	—	10·5
Total .	843,212	931,885	—	88,673	—	9·5

Although the total value of exports to all markets in 1933 is substantially below that for 1932 it is satisfactory to note that in the case of three markets, Australia, Brazil and Argentina, increases have taken place.

Following are figures of the exports of glass and glassware during the first four months of this year, with comparative figures for the two preceding years.

	£
January to April, 1933	397,667
,, ,, ,, 1932	426,008
,, ,, ,, 1931	464,337

The decrease has taken place principally in the sections producing scientific glassware and plate and sheet glass.

WIRELESS.

NEW RADIO RECEIVING VALVES.

A radio receiving valve up to the present time has been a fragile article, due mainly to its glass envelope and delicate internal electrodes. These deficiencies have prevented the valve manufacturer from offering the public a valve which will withstand rough usage and still retain its original characteristics. The new valves which are being produced by the General Electric Company and Marconiphone Limited, to which the name of "Catkin" has been assigned, appear to have solved the difficulties.

Although the construction is materially different from that of the old type of valve, the electrical characteristics are such that they may be used in place of the existing mains range of valves manufactured by the two companies.

To obtain uniformity in valves of the same type precision in the spacing of the electrodes must be maintained within one thousandth of an inch. To attain this precision with wires embedded in glass is virtually impossible. The new valves have no such arrangement; they have straight wires held by a steel clamp surrounding a mica insulator. The electrode system is located with precision within a copper anode envelope by mica spacing pieces—this copper anode thus replaces the glass envelope of the old type of valve. A very rigid unit is thereby achieved.

With uniformity of valves thus guaranteed, the task of the set manufacturer to produce sets of standard performance will be considerably reduced.

Firms desirous of receiving further particulars should apply to the General Electric Co., Magnet House, Kingsway, W.C. 2, or to the Marconiphone Co., Ltd., 210/212, Tottenham Court Road, W. 1.

THE CANNING INDUSTRY.

A New Industry.

Before the year 1922 England had few factories which specialised in the canning of foodstuffs. The English public was a little timid of any food that was not fresh. But a series of laboratory experiments showed that, if the greatest possible care were exercised in the preparation of foodstuffs, and if only materials of the best quality were used, the goods so canned could be made not only safe from a health point of view, but often better than "fresh" foodstuffs to be bought in open market. Medical experts had emphasised the necessity for preserving the vital qualities of foods, the vitamins of fruits and vegetables, etc., and the difficulties of doing so have been largely overcome. Furthermore, legislation prevents the use of harmful preservatives. Thus, the food preserving industry became established on an entirely new basis, and its efficiency together with the high standard of its products have overcome many prejudices. A tin of English food may be said to carry with it a number of guarantees of quality. A flourishing industry has grown up, and the demand for these excellent tinned goods is increasing both at home and abroad.

Canning factories in England have increased from eight in 1922 to 84 in 1932, and this year several new and extremely up-to-date factories are in course of construction. Britain does not produce fruits in such quantities as some other countries, but certain fruits and vegetables are produced in remarkably fine qualities. Imported fruits and vegetables are also used. So greatly has this business grown, that a national plan of organisation may well become necessary.

THE UNITED KINGDOM SCIENTIFIC INSTRUMENT INDUSTRY.

(*By J. W. Williamson, B.Sc., Barrister-at-Law, Secretary of the British Scientific Instrument Research Association.*)

To survey within a short article the British industry of the making of scientific instruments is, of course, impossible. All that can be attempted is to select some of the broader and more salient features for comment, and, since it is the United Kingdom scientific instrument industry of to-day, rather than the history of that industry, in which readers are likely to be interested, let us begin by noticing that perhaps the most striking recent development is the extensive and growing part that scientific instruments are playing in modern industry. Within, say, the last half-century an industrial revolution has taken place comparable with, and complementary to, the revolution that, in the earlier part of the nineteenth century, transformed United Kingdom industry from mere handicraft to factory production. This later revolution has consisted essentially of placing industries on a scientific, in place of an empiric, basis. In place of the old traditional and unorganised knowledge on which the industrial processes were based we now have a basis of scientific knowledge that is both certain and accurate. It is scarcely necessary to add that scientific instruments are the indispensable tools with which the scientists have won, and must continue to win, this knowledge.

In the domain of pure science, as the scientific research workers in the Universities or elsewhere break fresh ground, new phenomena are discovered requiring new or modified instruments for their recognition or measurement. The scientific instrument manufacturer is thus constantly called upon to design and construct new instruments to meet these novel demands. Similar calls for new scientific instruments come from the field of industrial research and development. Besides the instruments used for research in pure and applied science, there are numerous standardised instruments—often termed "commercial instruments"—used in industrial routine for ensuring efficiency of operation, control of processes and testing of products. In this group, too, we may include the instruments that are the tools of certain professions or of highly specialised crafts—such as the theodolite of the surveyor, the clinical thermometer of the medical practitioner or the sextant of the navigator.

One characteristic of the trend of development in scientific instruments is the increase in the accuracy of measurements of all kinds, emphasising the truth of Lord Kellvin's remark that the future development of science depended largely on going to another decimal point. For example, it is a regular practice in some of the optical manufacturers' work to produce lenses and prisms the surfaces of which do not depart from the desired curvature or from true flatness by more than one four-hundred-thousandth part of an inch (1/400,000″).

Another marked feature of recent development is exemplified by the enormous increase in the number of instruments that do their own recording. Apart from the convenience of self-recording instruments to the scientific observer in providing him with a continuous and permanent record, such a development must obviously extend the use of scientific instruments in industrial research and in works routine by enabling them to be put safely in the hands of less scientifically trained operators or even of ordinary workmen. We have not only, for example, recording ammeters, voltmeters, thermometers, pyrometers, calorimeters and barographs, but also operation recorders by which the functioning and sequence of a large number of separate operations may be registered graphically by a single instrument.

Mention should also be made of the developments that have taken place in distant reading instruments whereby, to take a single example, the temperature of a furnace may be read at some convenient position remote from the furnace.

Without making the claim that United Kingdom scientific instruments are in all cases superior to corresponding foreign instruments it can be truly said that in many types their supericrity is established and unquestionable. It would be invidious to particularise minutely, but the following facts, relating to optical instruments for physical researches, may be given as illustrations:—

> " An examination of the principal scientific journals of the world dealing with physics shows that in the four years terminating with June, 1914, there were, in the journals of the United States and France, far more references to the optical instruments made by one United Kingdom manufacturer than to those of any other manufacturer in the world, including those of the countries in which the journals were published. In the premier German physical journal (*Annalen der Physik*) during the same period there were 29 references to instruments made by this one British maker and 35 to those of the most frequently mentioned German maker. The German firm was about 25 times as large as the United Kingdom firm; no other firm, German or otherwise, was mentioned as often as the United Kingdom one."

The position thus indicated has been maintained since the War: it is probable that most of the research of the world in certain fields of prime importance in modern physics is being done with United Kingdom-made instruments.

A few years ago the British Scientific Instrument Research Association conducted a critical examination of the characteristics of British and Foreign Permanent Magnet Moving Coil Ammeters and Voltmeters of the Switchboard Pattern, in order to test the truth of an impression then current in some quarters that certain foreign instruments were superior to the corresponding British instruments. The full results of the examination are too long for inclusion here, but the following concluding sentence of the report issued by the Research Association may be quoted:—"The consistently high position occupied by certain British instruments, when the instruments are judged in the manner described, has led us to the definite conclusion that the best-known British instruments of the kind dealt with are quite equal to the best-known corresponding products of foreign origin, in the suitability of their design for the purpose to be served, in the consistency of their indications, and in the general lines and details of their construction."

Most, perhaps all, of the firms manufacturing scientific instruments undertake, in greater or less degree, simultaneously with the work of manufacture, experimental investigations into the problems arising out of the processes of manufacture, with the aim of enlarging the range, improving the quality and lowering the cost of their particular products. But the industry has gone beyond the particular research of the individual firms. In 1918 it formed, under the aegis of the Department of Scientific and Industrial Research, a co-operative organisation for research, namely, the British Scientific Instrument Research Association, which can and does prosecute researches of wider scope and of more distant aim than those which can conveniently be undertaken by any individual firm. It should be remembered, too, that the work carried out by the National Physical Laboratory is of great help to the British Scientific Instrument Industry, in providing accurate and authoritative methods of test as to the performance of instruments. Since the War the National Physical Laboratory has greatly refined many of the methods of optical measurement, for instance, the measurement of angles, of curvature and of index of refraction; and its work on the whole subject of colorimetry and colour photometry is putting this branch of science on a firm foundation. Moreover, the

British Optical Industry was mainly instrumental in securing the establishment in 1917, at the Imperial College of Science and Technology, of a Department of Technical Optics, which provides for the highest teaching and specialised training for research in the science of optics, especially in its relation to industry.

Thus the work of the National Physical Laboratory, the experimental investigations of individual firms, the work of the Research Association, and the activities of the Department of Technical Optics at the Imperial College, all contribute to keep robust and to improve the technical health of this essentially scientific United Kingdom industry.

CATALOGUE LIBRARY.

The undermentioned catalogues relating to United Kingdom manufacturers have recently been received and may be consulted by *bonâ fide* firms or individuals at the Office of His Majesty's Senior Trade Commissioner in India, Fairlie House, Fairlie Place, Calcutta.

Names and Addresses.	*Description.*
Duncan Stewart & Co., Ltd., London Road Ironworks, Glasgow, Scotland.	Sugar Machinery.
*British Ropeway Engineering Co., Ltd., 11-18, High Holborn, London, W.C. 1.	Aerial Ropeways
Metropolitan Vickers Electrical Co., Ltd., Trafford Park, Manchester.	Research and Testing Equipment.
E. J. Riley Ltd., Willow Mills, Accrington.	Sports Goods.
Spear & Jackson Ltd., Aetna Works, Sheffield.	Hacksaw Blades.
Thos. W. Ward Ltd., Albion Works, Sheffield.	New and Second-hand Machinery.
E. Baylie & Co., Ltd., Chain Works, Stourbridge.	Chains and fittings for Cranes and for Engineering and Railway purposes.

*The catalogue marked with an asterisk has also been received in the Office of His Majesty's Trade Commissioner, 3, Wittet Road, Ballard Estate, Bombay, where it may also be consulted by *bonâ fide* firms or individuals.

In addition, His Majesty's Trade Commissioner, Bombay, has recently received the undermentioned catalogues.—

Names and Addresses.	*Description*
The British "Rema" Manufacturing Co., Ltd., Halifax	Automatic Clutches
Crompton Parkinson Ltd., Bush House, Aldwych, London, W.C. 2.	Electric Motors.
Henry Hughes & Son, Ltd., 59, Fenchurch Street, London E.C. 3.	"Husun" Nautical, Aeronautical and Drawing Instruments Yacht and Motor Boat Compasses, Fittings and Accessories. Signalling Apparatus Echo Sounding Apparatus.
Liverpool Borax Co., Ltd., Liverpool	"Rito" Plastic Roofing Compound.

TRADE ENQUIRY.

The name of the United Kingdom firm referred to the enquiry mentioned below will be furnished to reputable firms on application to His Majesty's Senior Trade Commissioner, Post Box No 683 Fairlie House, Fairlie Place Calcutta.

No. 596-33.

A United Kingdom firm of manufacturers of Electric Lamps wish to appoint agents throughout India on a commission basis The firm would also be prepared to consider the appointment of agents on a purchasing basis

MGIPC—L—144HMTC—28-6-33—1,050.

H. M. TRADE COMMISSIONERS IN INDIA.

Calcutta—

Sir Thomas M. Ainscough, C.B.E.,
His Majesty's Senior Trade Commissioner in India and Ceylon.

Mr. R. B. Willmot,
His Majesty's Trade Commissioner at Calcutta.
Post Box No. 683, Fairlie House, Fairlie Place.
Telegraphic Address.—"Tradcom, Calcutta."
Telephone No.—"Calcutta 1042."

Bombay—

Mr. W. D. M. Clarke,
His Majesty's Trade Commissioner at Bombay.
Post Box No. 815, 3, Wittet Road, Ballard Estate.
Telegraphic Address.—"Tradcom, Bombay."
Telephone No.—"Bombay 23095."

Ceylon—

Imperial Trade Correspondent,
The Principal Collector of Customs, Colombo.

With Compliments.

JULY 1933

The
Commercial Bulletin

A Monthly Review of Official and other announcements relating particularly to British Export Trade

Issued by

HIS MAJESTY'S SENIOR TRADE COMMISSIONER
IN INDIA AND CEYLON.

FAIRLIE HOUSE,
FAIRLIE PLACE,
CALCUTTA.

CONTENTS.

PAGE.

GENERAL 1
FINANCE 3
CONTRACTS SECURED 7
IRON, STEEL AND METALS 8
MACHINE TOOLS 9
AUTOMOBILE AND ALLIED TRADES 11
TEXTILES 14
POTTERY AND GLASSWARE 18
PAPER 19
AVIATION 20
THE CORDAGE INDUSTRY OF GREAT BRITAIN AND NORTHERN IRELAND 24
CATALOGUE LIBRARY 27
TRADE ENQUIRY 29

GENERAL.

A general increase in the value of imports, exports and re-exports occurred in May as compared with April.

Imports during the month totalled £57,295,000, an increase of £6,143,000, while exports at £30,765,000 exceeded those of the previous month by £4,370,000.

As compared with May, 1932, the value of the imports increased by £1,215,000 (2·2 per cent.). The value of imports of food, drink and tobacco was about the same in the two months, imports of raw materials increased by £756,000 (5·5 per cent.) and of articles wholly or mainly manufactured by £1,065,000 (9·2 per cent.), while there were large relative decreases in the value of imports of animals, not for food, and of goods by parcel post.

Exports of United Kingdom goods increased by £568,000 (1·9 per cent.), there being an increase of £601,000 (17 per cent.), in exports of raw materials, and an increase and decrease of about £350,000 respectively in exports of manufactured articles and of food, drink and tobacco. The value of the exports of raw materials in May (£4,180,000) was higher than in any month since October, 1931, or, apart from that month, since December, 1930. To this increase both coal and wool largely contributed.

The excess of imports over exports of merchandise in May was £22·7 million, or about £1·5 million more than in April. The import excess is the highest so far recorded this year, and for the first five months of the year the excess amounted to £100·3 million. For the corresponding period of last year it was £120·1 million.

PROGRESS IN INDUSTRY.

The return of confidence in United Kingdom industry is now showing more definite results in a number of directions. The public is spending more freely, and manufacturers are producing goods with a reasonable certainty of being able to find customers. Both luxuries and articles of everyday use are sold in greater quantities than for some time past, and many acute observers are convinced that recovery will continue steadily.

The improving conditions are also evidenced by the employment figures, the latest returns issued by the Ministry of Labour showing an encouraging increase in employment during May combined with a substantial fall in unemployment. Between 24th April and 22nd May, the total of registered unemployed fell by nearly 115,000, and the number of registered unemployed in May was the lowest monthly total recorded since March, 1932.

In the motor industry the improvement is particularly pronounced and a number of manufacturers are full up with orders. The Austin Motor Company is now employing more workpeople than ever before in the history of the firm. It recently created a new record for weekly output, and such is the continued demand for Austin cars that large extensions of the works have been put in hand. The Wolseley Motor Company's "only trouble is to meet the demand"; while the Singer Car Company have recently employed 500 extra men at their works. For pedal cycles all records have been broken during the past few weeks. The Hercules Cycle Company of Birmingham recently received orders for 27,000 cycles in one week, representing 100 per cent. increase on their previous record week. Similar conditions are reported from other cycle manufacturing works.

BIRKENHEAD DOCKS MODERNISED.

Ten Year Scheme Completed.

The Mersey Docks and Harbour Board's new Bidston Dock, on the Birkenhead side of the River Mersey, which has now been opened officially marks the completion of a scheme of modernisation of the Birkenhead Docks which has been in progress for the past ten years. The scheme has cost over £2,000,000.

The work began with the deepening and widening of the Alfred Dock entrance to make the Birkenhead system available for the largest vessels using the Suez Canal. This scheme, together with alterations to the inner entrances, cost £1,200,000 and took five years to complete.

More recently the spanning of the passages between the various docks has been modernised by the substitution of five electrically controlled bascule bridges in place of the older type of hydraulic horizontal swing roadways, and, finally, the full scheme has been completed by the opening of the Bidston dock.

The latter has taken three years to construct, has cost £700,000, and is destined to play an important part in providing adequate accommodation for large vessels on the Birkenhead side. With a length of 1,000 feet and a width of 100 feet, it has a water area of 11 acres, and will take vessels up to 28 feet draught at any state of the tide.

Nearly 100 acres of land surrounding the dock have been levelled, and are available for factories or mills, which will be served by full railway and road facilities The new under-river tunnel has an entrance nearby.

FINANCE.

UNITED KINGDOM FINANCE AND COMMERCE.

By a special correspondent.

One of the most successful of United Kingdom industries at the present time is the chemical industry. This was not always the case. Before the Great War the lead in many departments of the chemical industry was taken by Germany. The war revealed the danger of allowing an industry so vital to the security of the country to be in the hands of other people than its own nationals. Since the war the whole British chemical industry has been overhauled. Even before Great Britain embraced a general tariff, in the autumn of 1931, there had been protection of certain branches of the chemical industry, chiefly the dye industry. This section of the industry had been protected by " key-industry " legislation, that is to say, the dye industry was regarded as of such exceptional importance—as being the basis of many other industries—that, despite the general free trade policy of Great Britain, protection was extended to it. Since Great Britain's departure from free trade generally, the United Kingdom chemical industry has enjoyed a much wider measure of protection.

But the United Kingdom chemical industry has by no means relied on protective tariffs for its prosperity. Long before many other United Kingdom industries had begun the process of " rationalization " called for by the great world slump, the chemical industry had begun to set its house in order. Amalgamation followed amalgamation until at length four outstanding great firms finally united to form that vast enterprise, the Imperial Chemical Industries. Visitors to London who stand on the east bank of the Thames (the Surrey side) looking across to the Houses of Parliament will see next them the vast pile of offices which houses the administrative staff of this colossal enterprise. As it is not too much to say that the history of "I. C. I.", as the company is termed in short, is the story of the present-day United Kingdom chemical industry, a study of the chairman's remarks at its recent annual meeting is not without interest. What follows here must not be construed as Sir Harry McGowan's actual words, but a brief survey of certain of the company's activities based on his speech.

First, one may take the position of the company in regard to research. In no industry is the importance of research into new materials, and methods of producing and using them, more clearly recognised and provided for. During the whole of last year all the research laboratories of the company were kept in full commission. Collaboration was maintained with the research laboratories of the Universities, to mutual advantage, and, on the other hand, the technical and commercial knowledge gained by the company was freely placed at the disposal of other industries served by them. The annual expenditure on research of I. C. I. in Great Britain alone exceeds half-a-million pounds, all of which is charged against revenue. The major part of such research is naturally technical, but the company takes a proper and lively interest in pure research in the chemical and other sciences which lie at the roots of the several sections of its industries.

Sir Harry McGowan must have felt satisfaction in announcing that so far as the manufacture of heavy chemicals is concerned Great Britain is now self-supporting. Under the heading of heavy chemicals comes, among other things, nitrogenous fertilizers, and heavy organic products the use of which is so rapidly growing. Indeed, the rate of discovery in all sections increases rather than slackens.

As is generally known now, the treatment of coal is one of the largest sections of the chemical industry. From coal come explosives and dyes, and the problem of how best to extract these valuable properties from raw coal is one of the chief problems of the industry. The older method of extraction was known as the carbonization of coal, that is to say, tar was first extracted from raw coal and the resultant tar further treated by hydrogenation to obtain the desired chemicals and dyes. The newer process is that of direct hydrogenation. In the past year I. C. I. has continued its research work on direct hydrogenation with marked success.

The production of synthetic nitrates (for fertilizers) is one of the greatest departments of I. C. I.'s activities, and in this section the chairman was glad to announce an agreement between the chief producers of synthetic and natural fertilizers which is doing something to mitigate the condition of wasteful competition in this sphere.

As the company has such vast ramifications throughout the world, it has, of course, the greatest interest in world trade recovery. It is good to learn, therefore, that the company looks forward hopefully to the results of this year's trading and to the continued prosperity of the company. While naturally hopeful of a successful issue of the World Economic Conference the words of its chairman in this matter are worthy of quotation *in extenso*. "Though," said Sir Harry McGowan, "the benefits of a paper money standard and tariff protection may prove transitory in this changing world, efficiency in administration, manufacture, and distribution will hold fast through every emergency". Such self-reliant outlook is calculated to carry I. C. I. far on the road to enhanced prosperity.

NEW COMPANIES.

Wm. Cory and Son, Ltd., and Stephenson Clarke and Associated Companies, Ltd.

Formed a new company entitled Coal Distributors (South Wales) Ltd., the shares in which are held as to one-half by each firm.

As from 1st July, Coal Distributors (South Wales) will act as the sole selling agents for all fuel produced by the Powell Duffryn group of collieries. It will also act as representatives in South Wales and Monmouthshire for Wm. Cory and Son and Stephenson Clarke and Associated Companies and their respective subsidiary companies. The first directors of the new company are: Sir Stephenson Hamilton Kent, K.C.B. (Chairman), Mr. Frederick James Leathers (Deputy Chairman), Baron Hyndley of Meads, Mr. Henry Cooper, Mr. Geoffrey Cory-Wright, Mr. William Reginald Hann, Mr. William McGilbray, and Mr. Albert George Stanfield.

The capital of Coal Distributors (South Wales) Ltd. is £50,000.

Millfurnishing Trust, Ltd.

Registered as a public company with a capital of £5,000 in 1s. shares, to acquire the business carried on by the Rapid Millfurnishing Company at Bankfield Mill, Rochdale, and to carry on the business of general mill furnishers, etc. The directors are: Viscount Selby, James A. Ashley, Tom Heap, and Thomas Seed. Registered office—Bankfield Mills, Crawford Street, Rochdale.

Blackaller and Pleasance, Ltd.

Capital of £1,000 in £1 shares. This is a private company which has been formed to carry on the business of manufacturers of perfume, etc. Directors: Ernest T. Neathercoat and Ernest A. Umney. Registered office—61, Welbeck Street, W. 1.

Ontario Silknit (England), Ltd.

Capital £25,000 in £1 shares. This public company has been formed with the object of carrying on the business of manufacturers, spinners, etc. Directors: Morris H. Epstein, Bernard Robbins, Louis Pearl, and Hugh D. P. Francis.

INCREASES IN CAPITAL.

	£
Edmunds Walker & Co., Ltd., ball and roller bearings	41,500
Kamra Tin Dredging Ltd.	70,000
National Steamship Co., Ltd.	300,000
Lines Bros. Ltd., manufacturers of toys and baby carriages	200,000
International Cocoa Corporation Ltd.	199,900
The Eagle Star and British Dominions Insurance Co., Ltd.	900,000
J. Compton, Sons, & Webb, Ltd., uniform clothing manufacturers	220,000
Field, Sons, & Co., Ltd. (Printers)	115,000
Marston Valley Brick Co., Ltd.	262,600

CONTRACTS SECURED.

Orders from Egypt.

New Bridge over the Nile.—The new bridge over the Nile in Cairo known as the Khedive Ismail Bridge, which was opened by King Fuad recently, replaces the old Kasr-el-Nil bridge which was completed in 1871 and which, owing to the increased volume of traffic and heavier loading due to motor vehicles, was considered inadequate for present requirements. The new bridge is 1,260 feet long and crosses the river in eight spans. It is 66 feet in width and an electrically operated opening span is provided for the accommodation of river traffic, giving two clear passages each of 66 feet. The designs were prepared by Dorman Long and Company, Limited, as engineers, in conjunction with Sir John Burnett and Partners as architects.

In addition, a number of other United Kingdom firms have recently secured smaller individual orders totalling in all £7,048.

A further order from Egypt was for 18,000 metric tons of sized coal for power houses amounting to £19,237 placed with Messrs. Maris Export and Trading Company, Limited, London.

Sugar Plant for India.

The Local Agents of Messrs. Duncan Stewart and Company, Limited, of Glasgow, report that they have secured from Messrs. Sree Radha Krishna Sugar Mill Limited an order for a 400-ton Sugar Plant, capable of extension to 600 tons, producing plantation white sugar by the sulphitation process. The factory is to be erected at Beldanga. This is the seventh order received from India by Messrs. Duncan Stewart and Company, Limited, for the 1933-34 season.

United Kingdom coal for export.

Several orders are reported to have been placed recently by Scandinavian and Finnish concerns with Durham collieries.

The contracts in question include 25,000 tons for the Oslo Gas Works, 75,000 tons for Oxelosund Iron Works and 15,000 tons for Helsingfors Gas Works. A contract is also understood to have been signed for 30,000 tons of Durham gas coal to be delivered to Frederiksborg, while it is announced that the Swedish State Railways have placed orders for 10,000 tons of engine coal.

South Africa.

The Rand Water Board has placed a contract for about 2,000 tons of lap welded steel pipes with the British Mannesmann Tube Company, Ltd.

Kenya Colony.

Messrs. Shelvoke and Drewry, Ltd., of Letchworth, have been entrusted with the supply of refuse collecting vehicles to the Corporation of Nairobi. The value of the contract is estimated to be in the neighbourhood of £2,100.

China.

It is learned that the Chekiang Highway Administration Department of the Chekiang Provincial Government, which is one of the most up-to-date of the Provincial Governments of China, has recently added to its fleet of motor omnibuses by buying 30 British chassis. These comprise 10 Bedfords, 10 Morris Commercial and 10 Commer trucks. The great importance of this purchase lies in the fact that these are the first British chassis to be bought by the Chekiang Administration which already maintains over 300 buses and lorries.

Order for United Kingdom coastal motor boats.

John T. Thornycroft & Co., Ltd., have obtained the contract for two coastal motor boats with armament from the Provincial Government in Canton. The approximate cost of these vessels is £22,700 each.

IRON, STEEL AND METALS.

The production and export returns for the month of May reveal a substantial improvement on those for April. The National Federation of Iron and Steel Manufacturers reports that there were 72 furnaces in blast at the end of May, which is three more than at the beginning. The production of pig iron during May amounted to 339,900 tons compared with 324,700 tons in April and 315,300 tons in May, 1932. The production of steel ingots and castings reached a figure of 599,600 tons, an increase of 90,000 tons over April and 182,700 tons more than the corresponding month last year.

As regards imports and exports, the official trade returns show all round increases and are a clear indication of improving conditions in the majority of markets. The imports in May of this year were 84,927 tons against 70,891 tons in April, the principal articles contributing to the increase being rolled steel beams and hoop steel.

The total iron and steel exports are returned at 178,639 tons compared with 132,847 tons in April and 151,325 tons in May, 1932. The following commodities have registered important increases as compared with the immediately preceding month:—pig iron 5,000 tons, mainly to the United States and Italy, galvanised sheets 2,000 tons, tinplates nearly 18,000 tons, cast pipes 2,000 tons, railway material 12,000 tons, the latter item being accounted for mainly by new rails shipped to South Africa and other countries.

The demand for tinplates is strong—probably due to the increase in the price of tin and the possibility of a further increase. From an average of about 15*s*. 6*d*. per basis box last year the present market quotation is 17*s*. 3*d*. The markets which have taken increased quantities during the past month are the Netherlands and Germany accounting for 4,000 tons, while 8,123 tons were shipped to Australia. Large consignments were also sent to Canada, which Dominion imported 6,904 tons from the United Kingdom during the month of May against 545 tons for the preceding month.

With regard to non-ferrous metals, some indication of improved prices can be seen in the fact that exports are up in value 50 per cent. over April. Tin is up 48 per cent. in quantity and 66 per cent. in value. Copper and lead prices are maintained at about the previous level, and the quantities exported show very slight increases.

MACHINE TOOLS.

Five-inch Centre Lathe for Commutator Work.—Henry Milnes, Ingleby Lathe Works, Bradford, have recently introduced a 5-inch centre lathe for turning commutators and similar operations for the electrical industry. A single-flanged pulley drive is provided to the headstock, mounted on ball bearings, and driving through an expanding friction clutch controlled by the lever at the front of the headstock. The spindle is bored through $\frac{13}{16}$-inch diameter, and has a No. 3 Morse taper centre hole. The threaded-spindle nose has a plain portion which acts as a register for the true running of chucks. The parallel spindle bearings are hardened and revolve in phosphor-bronze bushes. Concentric adjustment is provided for taking up the wear, and oil wells and felt pads ensure adequate lubrication. The spindle speed is approximately 1,000 r.p.m.

The tailstock has an internal thread spindle operated by balanced handle and it is clamped to the bed by an eccentric lever arrangement, the tenon being provided with an adjusting strip for taking up the wear.

The saddle has long wings on each of the bedways to protect them from grit and the cross slide is also of sufficient length to keep the guiding ways on the saddle always covered. The swivel slide rest is fitted with a hardened steel toolholder for carrying two tools. The steel feed gears in the apron give a sliding traverse of 200 cuts per inch and reverse motion is controlled by lever handle. To ensure instantaneous engagement and disengagement of the feeds at this fine traverse a V-tooth clutch is provided which is operated by a knurled pull and push knob. A hand wheel provides for the hand traverse of the saddle.

Brown & Ward, Ltd., Tyburn Road, Birmingham, are busy on 3-operation automatics. The firm have just completed a machine with special tool equipment for producing hexagon nuts from bar stock at the rate of 15 nuts per minute. The nuts are intended for $\frac{1}{4}$-inch diameter screws and are 0·448-inch across the flats.

H. W. Ward & Co., Ltd., Selly Oak, Birmingham, have found a definite improvement in business dating from the beginning of the year. The demand has been progressive and additional plant has been laid down in the turret lathe section in order to avoid working a night shift. Many of the machines in hand are intended for the motor trade, but a fair number are for use in general engineering shops.

AUTOMOBILE AND ALLIED TRADES.

HEAT TREATMENT OF WORKING PARTS.

The Use of Traffic Signals in a Factory.

Of the many ingenious processes which go to the manufacture of the modern car there is none, perhaps, which needs so much skill and precision as the heat-treatment of the working parts.

An example of the most up-to-date methods may be found in the hardening shop of the Wolseley Co., at Birmingham, where costly plant has been installed, and is kept fully employed. Such, indeed, is the pressure at Wolseleys that the hardening shop has been increased to three times its original size in the last two years, and even now further extensions are being built.

A stranger in this hardening shop might well think that he was suffering from a nightmare of traffic signals, for all around him are the familiar red, amber and green lights, changing their colours, apparently, with alarming indiscrimination. Actually, these lights indicate the temperatures of the many huge ovens, which in themselves are regulated from a central office like the control room of a liner. The foreman in charge here is surrounded by numbers of electrical instruments which he sets to provide any required conditions for the ovens. To such fine limits do they work that the normal heat of 910 degrees centigrade can be maintained to within ·3 per cent.

In all, there are over 30 ovens and more will be installed as soon as the extensions are completed. Nearly 4,000 gallons of oil are in constant use for quenching purposes, and millions of parts are tested in a month's work.

TROLLEY BUSES FOR AUSTRALIA.

News of the trolley bus and its increasing use for heavy urban transport work in Great Britain has travelled to Australia, which is now anxious to conduct experiments on its own account with modern vehicles of this type.

Accordingly, an order has been placed by the Corporation of Sydney with the Associated Equipment Co., Ltd., Southall, for two single deck 34 seaters of the 6-wheel type.

In one case, the chassis only will be shipped so as to give Australian labour the chance of building the body; and in the other the chassis will go out with a body shell only, leaving all the fittings to be incorporated down under.

The chassis will have electrical equipment by the English Electric Co., Ltd., and the British Thomson Houston Co., Ltd.

FINE BORING CYLINDERS.

New Process for Austin Engines.

Whereas the general practice to-day of finishing the cylinder bores of motor car engines is by honing with abrasive stones, the Austin concern have just developed an improved boring process.

They, in common with most motor manufacturers, previously employed honing to remove any minute imperfections left by the boring tool, but this new process of boring provides a finer and more accurate surface for the cylinders than any honing plant can ensure.

Special machines have been installed at Longbridge for this process, which employs a tool of diamond hardness, and further machines are actually being constructed in the Austin works for the same process.

This special form of boring ensures accuracy to within two ten-thousandths of an inch, and the cutting tool revolves nearly 3,000 times, travelling some eighteen hundred feet in boring a cylinder such as that of the Austin Twelve-Six.

In effect it produces a microscopic thread which retains lubricant whilst the engine is being run in.

As Austin pistons are now made from a special alloy of high silicon content which, due to its low expansion qualities, enables them to be diamond turned to an equivalent degree of accuracy, the most vital part of the car—namely, its power unit—reaches by this means a standard of precision which ensures long years of satisfactory service.

WORLD-WIDE SALESMANSHIP.

Polyglot Literature Sells British Cars.

Now that cars manufactured in Britain have by sheer merit forced recognition of the fact that they are suitable for service in all parts of the world, enterprising manufacturers are adopting every means of developing overseas business.

An excellent example of this spirit of enterprise is displayed by the Austin concern, which, in addition to issuing schedules of prices for Austin cars delivered at all important ports, is now publishing catalogues and sales literature in as many as 10 foreign languages, *viz.*: Spanish, Portuguese, French, German, Dutch, Norwegian, Danish, Japanese, Singalese, and Tamil.

Further overseas literature dealing with Austin cars in Siamese and Arabic is now in preparation.

MORRIS FORGING AHEAD.

By 10th May last the Morris factory had received overseas orders for 1933 models in excess of their whole 1932 season's export output, which latter in turn exceeded the 1931 figure by more than 40 per cent. There being almost a third of the 1933 season still to run, Morris Motors, Ltd., are confident of achieving yet another very satisfactory increase by the termination of this period.

The following figures show percentage increases in orders received by the Morris Factory for the nine months of the current season, compared with the corresponding period of last season:—

	Per cent.
India, Burma and Ceylon	83
Europe	54
North Africa and Asia	40
Far East	33
East and Central Africa	31
West Indies, British and Dutch Guiana	13

New High Speed Diesel Engine.

A new High Speed Diesel Engine for transport work has recently been introduced by Tangyes Limited, Birmingham. The engine, which is made in 4 cylinder and 6 cylinder units, is suitable for most vehicle chassis, both for road and rail work. The main features are the exceptional performance of the engine under varying conditions of load and speed combined with very low fuel costs and maintenance. The manufacturers report that many orders have already been received in England and arrangements are being made to market these engines abroad.

TEXTILES.

COTTON.

Raw Cotton.

Although the estimates of the 1933-4 cotton crop are high, both on account of a larger acreage than last year, and of favourable weather conditions in the Cotton Belt, the market seems to be more influenced by the increase in spinners takings, the American currency inflation, and the improved reports from piece-goods centres, and prices still tend upwards. At Liverpool, middling American on the spot is 2*d*. a lb. higher than at this time last year and nearly up to the 1913 price-level, and Fully Good Fair Sakellaridis 3*d*. a lb. higher.

Yarns.

Considerably more business has been under consideration in the yarn market. Offers are still on the low side, but turnover tends to increase. Fair weights both of American and Egyptian have been put down on home and Continental account, and a few orders have been received from China.

Piece-goods.

After a distinctly dull period over Whitsun enquiry has become general and customers in almost all markets are showing a more serious interest in quotations. India particularly has become more active, and some fair lots of dhooties have been booked for Calcutta, white mulls for Karachi, and bleaching mulls and jacconets for Madras. Shirtings and fancies have been wanted for the Straits Settlements, and poplins and shirtings for Shanghai—though the Shanghai auctions are not yet selling such large quantities as they do in normal times.

Prints and tanjibs have been sold for Egypt and the Near East, and some plains for West Africa.

Continental demand has come principally from Switzerland and Scandinavia. The Dominions remain quiet, but Australia has taken some heavy goods and Canada some finer fabrics. The home trade has been quiet but steady.

The export figures for May are as follows:—

Yarns.	*May, 1933.* *1,000 lbs.*	*April, 1933.* *1,000 lbs.*	*May, 1932.* *1,000 lbs.*
Grey	9,524	7,990	11,025
Bleached and dyed	1,391	1,354	1,717
Piece-goods.	*1,000 sq. yds.*	*1,000 sq. yds.*	*1,000 sq. yds.*
Grey	30,687	30,003	33,373
Bleached	54,218	60,060	77,615
Printed	30,931	28,795	34,696
Piece-dyed	44,902	44,342	45,612
Yarn-dyed	7,946	8,009	9,660
Total Piece-goods	168,686	171,209	200,958

WOOL.

Raw material values in May varied from 15 per cent. to 30 per cent. higher than twelve months ago, and although tops and yarns have hardened in price they are still below the pre-war average price and are consequently cheap. It has been possible of late years to buy merino wool and tops at what were once crossbred prices with the result that despite the trade depression, consumption of the finer goods of wool has overtaken the increased supply. Instead of the cheapness of crossbreds tending to depress merino values, the opposite seems to have been the case, and the strength of merinos has been sufficient to increase the prices of the much neglected crossbred wools.

The majority of spinners are well employed and more interest is being shown in crossbreds. The improvement in the export of semi-manufactures and piece-goods continues; the figures for May this year showing an increase over May, 1932, under all headings except two small items of miscellaneous yarns and damasks, tapestries, etc., while the five months' totals are also better than the corresponding period last year with the abovementioned exceptions, and worsted yarns, flannels, furnishing fabrics and mohair and alpaca fabrics.

The prices of piece-goods, especially fancies, show a tendency to increase, although it is difficult to make advances on plain cloths. The heavy woollen district reports greater activity than for several years although production is still far short of capacity. The Rochdale flannel district is well employed and West of England manufacturers are busy, while some Scotch manufacturers making the highest class tweeds report an improvement in business to which the advance in wool values has no doubt contributed, but many Scotch firms are under-employed.

A few orders for piece-dyed suitings have come to hand from the Far East, and small orders have been received from India, but trade with Burma and Egypt remains quiet, whilst the advance in raw commodity prices is expected to influence demand from the Straits Settlements shortly. A few South American Republics and the British West Indies have passed small orders. Some fair orders have also been received from the U.S.A. for men's wear fabrics and dress goods, particularly the heavy woollen district have booked orders for novelty cloths and sportswear fabrics. Scandinavian and Dutch orders have also gone to Dewsbury. Better business is also being done with Canada, although the old bulk trade has disappeared. South Africa appears to be one of the best markets at the moment, demand coming from the stores trade and certain contract business.

LINEN.

The Northern Ireland Ministry of Agriculture reports that the flax crop made good progress in May although in a restricted area some damage was caused by "grub".

During May the flax market became quieter and in the last fortnight prices weakened a little in respect of flax of most origins. During June, however, prices have regained some of the lost ground although business is still not brisk.

Activity in the yarn market is still maintained and spinners are endeavouring to raise prices. Weavers, however, are holding out strongly. Some mills are now booked up for several months ahead. The coarser lines and tows are more in demand than was the case in May.

The merchanting end is enjoying better business than was expected for this period of the year. Indeed, in some quarters there is talk of a minor boom. The United States is the customer for this new business, linen suits and dresses being very popular there this season. In other classes of linen there has also been some revival but in a much lesser degree.

The export figures for May show that the improvement is not quite so important as rumour would make it. In May linen piece-goods to the value of £114,521 were exported to the United States of America, *i.e.*, slightly less than £3,000 more than the comparable value for May, 1932. However, when the disheartening figures for the earlier months of this year are remembered it is obvious that the revival is considerable. Another welcome recovery was that of Australia, to which for the first time this year more linen piece-goods were shipped in a month than in the corresponding month of 1932. Last month there were shipped to Australia goods of this class to the value of £30,011. The value for May, 1932, was £23,170.

Linen piece-goods had a very good month, but the improvement in this class was unfortunately offset by the continued poor showing of made up goods, particularly of Damask Table Linen, of which the value shipped was only £38,324, as compared with £62,670 in May, 1932.

The value of linen goods imported into the United Kingdom in May was £22,061, as compared with £33,777 in May, 1932, and £52,091 in May, 1931.

The value of linen goods exported from the United Kingdom in May was £436,109, as compared with £440,054 in May, 1932, and £472,052 in May, 1931.

The value of linen goods exported from the United Kingdom during the five months ended 31st May, 1931, 1932, and 1933 were respectively, £2,295,818, £2,360,840, and £2,190,833. The quantities of linen piece-goods exported during the same periods were 27,746,000, 32,212,300 and 31,375,500 square yards.

POTTERY AND GLASSWARE.

The most satisfactory feature in connection with the Pottery industry is a fall of 2,382 in the unemployment figures as shown in the monthly return recently issued. There is now a total of 15,810 either wholly unemployed, working short time or temporarily standing off, whereas the total for the previous month was 18,222. Compared with the corresponding period of 1932 the figures of unemployment are down by 1,732.

Recent reports from the Potteries indicate that most sections of the industry are busier, with a distinct tendency towards improvement in the demand for export trade.

Following are details of the total quantity and value of the export of pottery of all classes (excluding bricks) for the first five months of this year, with comparative figures for the two preceding years.

	Quantity *cwts.*	*Value* £
January to May, 1933 . .	912,252	1,088,253
,, ,, ,, 1932 . .	1,052,303	1,204,190
,, ,, ,, 1931 . .	1,403,682	1,433,880

The following statement gives details for each section of the industry:—

Section.	*Value of*	*Exports.*	*Decrease.*	*Percentage of decrease 1933 compared with 1932.*
	1933. £	*1932.* £	£	
Tiles (all classes) .	80,983	84,753	3,770	4·4
Sanitary ware .	237,980	251,809	13,829	5·5
Chinaware . .	70,839	80,726	9,887	12·2
Electrical porcelain . . .	22,865	43,472	20,607	47·4
General earthenware . .	558,936	590,663	31,727	5·4
Stoneware . .	9,768	14,934	5,166	34·6
Refractory goods and clay products not elsewhere specified	106,882	137,833	30,951	22·5
Total .	1,088,253	1,204,190	115,937	9·6

The exports of glass and glassware during May, 1933, were valued at £111,122 compared with £110,153 for the corresponding month of 1932, a small increase of £969.

Following are figures of the exports of glass and glassware during the first five months of this year, with comparative figures for the two preceding years.

	£
January to May, 1933	508,789
" " " 1932	536,161
" " " 1931	596,106

PAPER.

Considering the state of trade generally, conditions in the paper industry are on the whole comparatively good. Most of the mills who have large selling organisations of their own are managing to secure sufficient business to keep themselves fairly well occupied.

The Thames Board Mills Limited, of Purfleet, Essex, have installed a new machine for the manufacture of paper boards. The machine, which is already in operation, is claimed to be the largest paper board making machine in the world. It was built by Charles Walmesley & Co., Ltd., Bury, and produces board of a width of 13 feet 9 inches. It has practically doubled the capacity of the mill which has now an output of 5,000 tons per week.

Transparent Wrapping.

Two interesting developments have occurred recently in connection with the manufacture of transparent wrapping. One is the registration of the British Sidac Co., Ltd., to take over the Neura Silk Works, Sutton Oaks, St. Helens, for the purpose of producing transparent wrapping. The work of adapting the latter's machinery to the new process is to commence at once.

The other is the acquisition by the British "New Wrap" Co., Ltd., of a factory at Wigton Cumberland, with existing plant for the same purpose. To commence with the output is expected to be 4¾ tons of transparent wrapping per week, and it is hoped to make deliveries in about 6 months time. The sole selling agents will be Felber, Jucker & Co., Ltd., 76, Cannon Street, London, E.C.4.

At the annual meeting of Wiggins, Teape & Co. (1919), Ltd., 10/11, Aldgate, London, E.C.3, the Chairman stated that the company had acquired a share capital of the Dartford Paper Mills Ltd. and that a subsidiary company styled the Greaseproof Paper Mills Ltd. had been formed for the purpose of making greaseproof paper. A mill has been erected on a site adjacent to the Dartford Mill, and the production of greaseproof is expected to commence in July.

Fancy Papers.

In the past United Kingdom box makers have been dependent on foreign sources of supply for certain novelty fancy papers, but the Dartford Paper Mills Ltd., Blackfriars House, New Bridge Street, London, E.C.4, has now placed on the market under the name "Splasho" a series of fancy papers having a coloured cloudy effect. The papers are supplied either plain or embossed. J. & W. Mitchell Ltd., Bordesley Paper Works, Birmingham, also introduced a new series of fancy papers for the box-making trade. It is expected that these new productions will replace to a considerable extent foreign papers hitherto used.

AVIATION.

A YEAR OF PROGRESS AT THE ROYAL AIR FORCE DISPLAY.

Year by year the aeroplanes shown in the Park reserved at the Royal Air Force Display for new and experimental aircraft provide an epitome of contemporary progress in aeronautical engineering in the United Kingdom. The curtain of secrecy, which necessarily hides much of the latest developments in design and construction of aeroplanes and aero engines is partly drawn aside. Fighting 'planes, "general purpose" aircraft, heavy transport military craft, new light aeroplanes and commercial machines—all have their place in the Park as the years go on. Some of them are adopted eventually for use in the Service or with the air transport fleets. Others pass into oblivion as interesting experiments which did not quite come off. There are new and interesting engines, new ideas in construction, new ways of making an aeroplane fly more efficiently.

Aircraft selected for inclusion in the Park on 24th June numbered fifteen, and belonged to widely variant types. The biggest machine on view was a large three-engined military transport biplane, the smallest a two-seater autogiro, or " windmill " 'plane, the unorthodox flying machine in which curved rotating vanes displace the normal fixed wings. There were three machines in which the chief interest resides in the power units installed in them. There were two aeroplanes which hold world records. There were new single-seater fighters, new torpedoplanes, a fast mail-carrier and a new commercial monoplane.

Richly deserving first mention are the record breaking craft, the Vickers " Vespa " biplane powered with a super-charged Bristol " Pegasus " air-cooled motor in which Mr. Cyril Uwins climbed last September to the astounding height of 43,976 feet above sea-level, and the shapely Fairey long-range monoplane (530 h.p. Napier " Lion " engine) flown non-stop by Squadron-Leader O. R. Gayford and Flight-Lieutenant G. E. Nicholetts from Cranwell, Lincolnshire, to Walvis Bay, South-West Africa—a distance of 5,309 miles. These spectacular achievements have set the seal on the reputation of British aircraft matériel; they point the way of eventual rationalisation of these record feats, to the time when it will be a commonplace for men to fly 8½ miles above the surface of the earth or to cover five thousand miles and more without intermediate alightings. The record flight of to-day is ordinary military or commercial practice to-morrow; the history of aviation has never failed to justify the truism.

Defence of the home country against aerial attack is the reason for the existence of four new single-seater fighters. One of these, the new Hawker " Super-Fury " intercepter fighter, is claimed by the Air Ministry to be the fastest military aeroplane in the world. Urged by the power of a new and improved Rolls-Royce " Kestrel " engine, this fine biplane, which has been developed from the standard " Fury " interceptors that constitute the flying equipment of certain R.A.F. squadrons, is capable of 250 miles and hour in level flight, even with full load of fuel and military equipment on board. Such velocity, coupled incidentally with amazing rate of climb, is far outside the known capabilities of any aeroplane designed and built outside Great Britain.

Not greatly inferior to the " Super-Fury " in speed, and able to remain aloft for much longer on one fuel load, are the three " day and night " fighters, each of which derives power from a supercharged air-cooled motor. Two of them—the Gloster S.S. 19B and "Bulldog IV" biplanes—employ the Bristol "Mercury" engine, which delivers maximum power of 560 h.p. at a height of 16,000 feet. The third is the latest version of the Armstrong Whitworth A.W. XVI fighter, powered with a supercharged "Panther" engine of comparable power output. Each of these fine aeroplanes is capable of speeds greatly in excess of 200 miles an hour. They owe their performance to excellent aerodynamical features as well as to the power and efficiency of their motors. Their careful streamlining, and the attention paid to the elimination of all details which might set up "parasitic" resistance to movement through the air, are typical of present-day British practice. And to high speed and climbing power they join admirable qualities of control, easy handling and low landing speed.

The two torpedoplanes exemplify the latest practice in design of these formidable weapons of war, which in the minds of many strategists are coming to be recognized as the most potent menace in existence to the heavily armoured surface warship. They are alike in power plant—a single Rolls-Royce 825-930 h.p. "Buzzard" water-cooled unit—and each is the product of a firm which has much experience in the construction of torpedo-launching aircraft. The Vickers biplane and its Blackburn rival are shapely craft, in spite of their size: their appearance, apart from the power available, is sufficient evidence of performance qualities beyond the ordinary.

Transport of heavy military loads over long distances is the mission of the new three-engined Handley Page biplane, which draws its power from Bristol "Pegasus" motors. Here again fine lines and businesslike construction stamp the product of a firm whose name is practically synonymous with big aeroplanes all over the world. Like all of the other new aeroplanes included in the Park. the Handley Page heavy-transport craft marks an important advance in most of the many facets of performance.

Two of the machines which owed inclusion to their engines are fitted with compression-ignition motors that burn heavy oil instead of volatile spirit. In a Hawker "Horsley" biplane is fitted a Rolls-Royce 500 h.p. "Condor" water-cooled motor which was the first heavy oil aeroplane engine to pass the severe type tests imposed by the Air Ministry. A Bristol "Phœnix" air-cooled compression-ignition motor supplies power to a Westland "Wapiti" biplane. From the technical angle these two craft may perhaps be reckoned the most interesting of the aeroplanes on view. Much is hoped from the successful heavy oil aero engine—economy from the use of cheaper fuel, longer range because the oil-burning unit consumes less weight of fuel than a petrol engine, and final elimination of fire risk. Until recently, the excessive weight of the heavy oil engine has prevented its use in aeroplanes; step by step British research workers have overcome that difficulty, and the near future should see many types of aircraft equipped with oil-burning engines.

The third of this group of machines was a Fairey IIIF biplane powered with a special Rolls-Royce "Kestrel" motor in which a big advance has been made towards reducing engine noise. "Silence research" is occupying much time and attention just at present; the new "Kestrel" unit is the first of its kind which has yet been shown in public, and indicates satisfactorily the way to further important progress.

Twenty-three designs were submitted to the Air Ministry to fulfil the demands of an exigent specification of a high-speed mail carrier. The machine was to be capable of carrying at least 1,000 pounds of mails at a cruising speed of not less than 150 miles an hour over a distance non-stop of 1,000 miles. The Boulton-Paul firm was finally selected to build the machine, and their P.64 biplane is the most distinctive of the three civil aircraft which make up the 15 machines in the Park. Its preliminary trials have shown that it will far surpass the Air Ministry's requirements. Cruising speed, on the power of two "Pegasus" engines, will be 172 m.p.h. and maximum attainable speed 195 m.p.h. The still-air range will be at least 1,250 miles. And the machine provides accommodation for a crew of two or three men, space for powerful radio receiving and transmitting gear, arrangements for the installation of devices to pick up mailbags while the craft is in flight, and exceptionally comfortable accommodation for the men on board. Further, the machine will fly easily, even with full load on board, on less than the full power of either engine.

The Blackburn civil monoplane, a ten-seater craft powered with two Armstrong Siddeley 400 h.p. "Jaguar" engines, is one-half of an interesting experiment. Its sister machine, a biplane, was shown last year. Both craft have the same power installation and are designed exactly alike except for the lifting surfaces. Their trial flights are expected to throw additional light on the vexed question of the relative merits of biplane and monoplane construction.

Completing the aeroplanes in the Park was the little Cierva C.30 autogiro with an Armstrong Siddeley 100 h.p. "Genet" motor, which represents one of the more recent stages in the development of a deeply interesting kind of flying machine. Though it is doubtful whether the "windmill" 'plane will ever oust the orthodox fixed wing aeroplane from favour, its ability to land steeply in confined areas and to take off at steep angles must assure it a place in aviation. And it is noteworthy that, though several nations have taken up the development ~~of~~ Mr. de la Cierva's brilliant invention, none has progressed farther or more satisfactorily than Great Britain. Evidently British aeronautical engineering practice possesses a little something which some others have not got!

THE CORDAGE INDUSTRY OF GREAT BRITAIN AND NORTHERN IRELAND.

(*By Archibald Crawford, K. C., Chairman, The Rope Twine and Net Manufacturers Federation.*)

Considering all the factors tending to decline in trade, the Cordage Industry of Great Britain and Northern Ireland maintains its position well. Some idea of its production may be gained from the following figures of Production, as stated in the Report of the Census of Production of 1924 and 1930, as undertaken by the Board of Trade:—

Cordage, i.e., cords, cables, ropes and twine.	*1930.* *Tons.*	*Value.* £	*1924.* *Tons.*	*Value.* £
Under ¼″ in diameter—				
(*a*) Binder and reaper twine (of hemp) .	10,020	497,000	17,900	983,000
(*b*) Other sorts . .	25,200	2,108,000	29,150	3,094,000
	35,220	2,605,000	47,050	4,077,000
Of ¼″ in diameter and over	47,891	2,476,000	52,800	3,418,000
	83,111	5,081,000	99,850	7,495,000
Nets—of all kinds . .	4,000	915,000	3,550	1,031,000
	87,111	5,996,000	103,400	8,526,000

An unofficial estimate for 1932 yields the following figures:—

> The Total Production of all kinds of Cordage Goods (except Nets) in 1932 is estimated at 75,775 tons, or 91·17 per cent. of the 1930 Production which was 83,111 tons.

It will thus be seen that production has been declining, although not at a very rapid rate. As is well known, the Cordage Industry supplies a vital factor in the working of such important industries as Shipping, Railways, Mining, Fishing and of Commerce generally. Further, when the plight of the first four of these is kept in mind, it is indeed surprising that things are not much worse with Cordage Manufacturers in the United Kingdom.

In this Industry, as in so many others, the price factor is the weak spot at the present time and it is hoped that recent world and British trade movements will help to raise values.

The Import position in this Industry reveals that while in Ropes and large size cords there is little importation, owing largely to the hold which British quality has gained upon Shipping Companies in general, there were in pre-tariff times very considerable importations of both hard and soft fibre twines which have, however, since the introduction of Tariffs in December, 1931, dropped very sharply.

Cordage, cables, ropes and twines of hemp or like materials.	*1929.* *cwts.*	*1930.* *cwts.*	*1931.* *cwts.*	*1932.* *cwts.*
Under ¼″ in diameter—				
Of hemp: Binder and reaper twine	62,216	85,744	108,716	69,362
Other descriptions of hemp or like materials . .	131,255	156,328	171,481	32,525
Of ¼″ in diameter and over .	54,633	38,950	30,260	8,411
Nets—all kinds . . .	3,650	4,181	4,476	not yet available
	251,754	285.198	314,933	110.298

1932—Nets not included in the total.

The Export position, also, is of interest and reveals a reasonable share in a depressed world market. The price position is, however, in this as in other export trades, unsatisfactory.

Cordage, cables, ropes and twines of hemp or like materials.	*1929.* *cwts.*	*1930.* *cwts.*	*1931.* *cwts.*	*1932.* *cwts.*
Under ¼″ in diameter—				
Of hemp: Binder and reaper twine	46,911	54,672	79,905	77,781
Other descriptions of hemp or like materials	111,123	98,073	80,919	96,870
Of ¼″ in diameter and over .	301,012	221,680	174,676	154,184
Nets—all kinds	34,472	31,919	25,235	not yet available
	493,518	406,344	360,735	328,835

1932—Nets not included in the total.

The position in regard to Raw Materials reveals the recent changing tendencies in the trade. It will be noted that there is a steady relative decline in the use of soft fibres such as true hemp (Cannabis Sativa) and Indian Hemp (Crotalaria Juncea) and a steady relative increase in the use of Hard Fibres. As between the two principal Hard Fibres used, East African Sisal is steadily gaining ground at the expense of Manilla, although for marine purposes the latter still maintains its supremacy.

The figures are as follows:—

Imports of hemp and hemp tow into United Kingdom.	*1912-13.* *Average.*	*1921.*	*1929.*	*1930.*	*1932.*
True hemp	25·2	11·5	11·8	9·0	6·2
Indian (Sunn) Hemp .	15·8	7·4	5·0	3·9	3·2
Manilla	73·9	63·7	50·6	50·2	22·3
Sisal	not given	6·7	5·1	4·5	17·0

The figures since 1932 will reveal a much greater consumption of Empire Sisal.

With a view to promoting the use of this fibre the Rope and Twine Makers in Great Britain have entered into alliance with the producers of Empire Sisal through the medium of a special *ad hoc* committee which considers all such matters as—

Grading
Contract Forms
Improved methods of Production, and so on.

As a foreign fibre (Manilla Hemp) still holds the field in so far as marine cordage is concerned, it is interesting to note that through the Manilla Hemp Association in London the Rope Makers and Importers confer together and deal with matters similar to those outlined above.

For the better protection of consumers in Great Britain as also the trade in general, the powers of the Merchandise Marks Act, 1926, have been invoked with the result that in October, 1933, an Order will come into force, to the effect that—

> Each Ball, cheese, hank, skein or coil of imported cordage, cables, ropes and twine (including binder and reaper twine) of vegetable fibres, will require to bear on sale or exposure for sale an indication of origin durably and conspicuously stamped, stencilled, printed, impressed or embossed on a label securely attached thereto, and that in addition any sack, bag, box, or other container or wrapper in which the goods are sold or exposed for sale should also bear an indication of origin stencilled, stamped or printed thereon, or on a label securely attached thereto.

The Trade is organised in the Rope, Twine, and Net Federation which looks after wages and labour problems from the employers' point of view and has several commercial associations which, in combination, deal with Tariffs, Trade Treaties, the Board of Trade, Statistical and Commercial aspects of the various questions affecting the Industry. Among these are The British Hemp Rope Association, The Trawl Twine Association, The Twine Association and The Sisal Twine Association.

CATALOGUE LIBRARY.

The undermentioned catalogues relating to United Kingdom manufacturers have recently been received and may be consulted by *bonâ fide* firms or individuals at the Office of His Majesty's Senior Trade Commissioner in India, Fairlie House, Fairlie Place, Calcutta.

Names and Addresses.	*Description.*
Andrew Maxwell, St. Pauls Square, Liverpool.	"Rito" Plastic Compound for Roof repairs.
Ambrose Shardlow & Co., Ltd., Washford Road, Sheffield.	Micrometers.

Names and Addresses.	*Description.*
J. Lyons & Co., Ltd., Cadby Hall, London.	Chocolates and Confectionery.
John Elliott & Sons, Bush Lane House, Cannon Street, London, E.C.1.	Tool Steel, Oil Cans, Pickaxes, Shovels, Spades, Anvils and Hammers.
Imperial Typewriter Co., Ltd., Leicester.	Typewriters.
*Rowntree & Co., Ltd., York	Cocoa, Chocolates and Confectionery.

Catalogues marked with an asterisk have also been received in the Office of His Majesty's Trade Commissioner, 3, Wittet Road, Ballard Estate, Bombay, where they may also be consulted by *bonâ fide* firms or individuals.

TRADE ENQUIRIES.

The names of the United Kingdom firms referred to in the enquiries mentioned below will be furnished to reputable firms on application to His Majesty's Senior Trade Commissioner, Post Box No. 683, Fairlie House, Fairlie Place, Calcutta.

No. 719-33.

A United Kingdom firm of manufacturing chemists is desirous of appointing agents in each of the following five centres:—Calcutta, Madras, Delhi, Bombay and Karachi. The firm manufacture surgical dressings, plasters, ligatures, hot water bottle cases, bandages, trusses, artificial limbs, hospital furniture, etc. In addition they are manufacturers of toilet preparations including tooth paste, hair preparations, toilet powders, perfumes, etc.

No. 734-33.

The Export Agents of a United Kingdom firm manufacturing Spirit Measuring Taps, together with stands or brackets, are desirous of appointing an agent in India for the sale of these taps.

MGIPC—L—183HMTC—1-8-33—1,050.

H. M. TRADE COMMISSIONERS IN INDIA.

Calcutta—

Sir Thomas M. Ainscough, C.B.E.,
His Majesty's Senior Trade Commissioner in India and Ceylon.

Mr. R. B. Willmot,
His Majesty's Trade Commissioner at Calcutta.
Post Box No. 683, Fairlie House, Fairlie Place.
Telegraphic Address.—"Tradcom, Calcutta."
Telephone No.—"Calcutta 1042."

Bombay—

Mr. W. D. M. Clarke,
His Majesty's Trade Commissioner at Bombay.
Post Box No. 815, 3, Wittet Road, Ballard Estate.
Telegraphic Address.—"Tradcom, Bombay."
Telephone No.—"Bombay 23095."

Ceylon—

Imperial Trade Correspondent,
The Principal Collector of Customs, Colombo.

With Compliments.

AUGUST 1933

The
Commercial Bulletin

A Monthly Review of Official and other
announcements relating particularly
to British Export Trade

Issued by
HIS MAJESTY'S SENIOR TRADE COMMISSIONER
IN INDIA AND CEYLON.

FAIRLIE HOUSE,
FAIRLIE PLACE,
CALCUTTA.

CONTENTS.

PAGE.

GENERAL 1

BRITISH INDUSTRIES FAIR, 1934 3

FINANCE 4

CONTRACTS SECURED 8

IRON AND STEEL 10

AUTOMOBILE AND ALLIED TRADES 11

LONDON TRAFFIC BOARD 11

SHIPBUILDING 13

TEXTILES 15

POTTERY AND GLASSWARE 18

PAPER 19

AVIATION 20

THE BIRMINGHAM JEWELLERY INDUSTRY (SPECIAL ARTICLE) 26

CATALOGUE LIBRARY 31

GENERAL.

An improvement of over £24,000,000 is shown in the United Kingdom trade balance for the first half of the present year compared with the first six months of last year, the adverse balance of imports over exports being respectively January-June, 1932, £144,494,000 and January-June, 1933, £119,876,000, a reduction of £24,618,000.

Imports.—A striking feature of the imports during the first six months of 1933 is the drop of £10,927,970 on manufactured articles.

Comparing June imports with those of the corresponding month of last year, raw material employing labour in the United Kingdom shows increases in cotton, hides and skins, mining products, and in a minor degree in rubber, non-ferrous ores and iron ore.

Exports.—Compared with a year ago, exports of food, drink and tobacco declined in value by 12 per cent. and those of manufactured articles by 5 per cent., while exports of raw materials increased by 3 per cent. Among the main groups of manufactured articles there was a substantial increase in respect of non-ferrous metals and manufactures thereof (£794,000 or 161 per cent.). Exports of iron and steel and manufactures thereof increased by £131,000 or 6 per cent., and cotton yarns and manufactures showed a decrease of £822,000 or 16 per cent.

Re-exports.—The re-exports of food, drink and tobacco during June were £286,000 less than in May and £157,000 less than in June, 1932. The value of the raw materials re-exported was £1,129,000 greater than in May, due to increases of 71 per cent. and 112 per cent. respectively in the re-exports of raw wool etc. and undressed hides and skins, while very substantial increases in respect of these two groups accounted for an increase of £757,000 or 36 per cent. in the value of re-exports of raw materials as compared with a year ago.

Re-exports of manufactured articles were £562,000 or 68 per cent. more than in May and £524,000 or 58 per cent. more than a year ago, the increase being due to re-exports of chemicals, drugs, etc., having increased in value from £35,000 in June, 1932, and £38,000 in May, 1933, to £673,000.

The construction of the plant itself, estimated to take the general situation in Great Britain. There has been a decrease in the unemployment figures, a most welcome indication of returning prosperity. Some economists are inclined to think that the end of the depression is in sight, and a number of factors are now cited in support of such a contention. During June 123,000 more persons were working in the insured trades than during May, and 306,000 more than a year before. In addition, there was more employment among non-insured workers in shops and offices, and on farms.

Considerable improvement is recorded in the iron and steel industries. There is a rise in industrial share prices. Wholesale commodity prices have risen, a condition—we have been told by the world's greatest experts—necessary for and precedent to economic recovery. This has stimulated manufacture in various directions and the consequent growth of confidence has led to more buying by the general public and an increase in the retail trade. These are a number of symptoms which have manifested themselves of late. They certainly do not give any guarantee of a cure for economic ills, but they are welcome indications of a definite improvement, for they all point in the direction of trade recovery, more employment and greater spending capacity on the part of the general public.

OIL FROM COAL.

For six years Imperial Chemical Industries, Limited, have conducted research on the hydrogenation of coal, tar, and other materials.

In view of the undertaking given in the House of Commons by the Prime Minister, the Directors of Imperial Chemical Industries, Limited, have now authorised a scheme for the erection of a large commercial plant, which is to be located at the Company's works at Billingham-on-Tees, Co. Durham, where special facilities are available.

An initial output of 100,000 tons a year of first grade petrol is aimed at by processing 400 tons of coal a day and using altogether about 1,000 tons a day of coal.

The operation of the plant will, it is claimed, give permanent direct employment to 2,500 miners and other workers, as well as much indirect employment.

The construction of the plant itself, estimated to take about 1½ years, will call for much activity in the iron and steel and heavy industries. Seven thousand men will find direct employment during these 1½ years, and it is expected that there will be indirect employment for a further 5,000 men.

The necessary new capital of about 2½ millions sterling will be furnished by Imperial Chemical Industries, Limited, from their own resources, which are ample for this new enterprise and for the general business of the Company.

BRITISH INDUSTRIES FAIR, 1934.

The British Industries Fair will open in London at Olympia and the White City, and at Castle Bromwich, Birmingham, on the 19th February, 1934 and will close on 2nd March, 1934. The Textile section of the Fair at the White City is again being organised by a special Committee, under the auspices of the Department of Overseas Trade and represents the cotton, woollen, silk, artificial silk and linen industries and other branches of textile manufacture. The Furniture section of the Fair, which is expected to occupy a larger area than that occupied at the Fair of 1933, will again be housed at the White City.

Exhibits of the lighter trades will be presented as usual at Olympia, whilst exhibits of machinery and of the heavy industries will again be organised at Birmingham by the Birmingham Chamber of Commerce under the auspices of the Department of Overseas Trade. The London and Birmingham sections are complementary to one another, the whole forming the British Industries Fair.

The trades comprised within each of the sections of the Fair are given below:—

London (Olympia).

Group 1.—**Brushes and Brooms.**

Group 2.—**Chemicals, Drugs, Perfumery and Chemists' Supplies.**

Group 3.—**Cutlery, Jewellery, Electro-Plate, Silverware, Watches and Clocks.**

London (Olympia)—contd.

Group 4.—Pottery and Glassware (China, Earthenware and Stoneware, Glass and Glassware).

Group 5.—Fancy Goods.

Group 6.—Leather, Leather Goods and Travelling Requisites.

Group 7.—Sports Goods, Toys and Baby Carriages.

Group 8.—Stationery, Paper, Printing and Publishing.

Group 9.—Office Appliances, Metal Office Furniture.

Group 10.—Printing, Bookbinding, etc., Machinery.

Group 11.—Musical Instruments, Gramophones and Wireless Apparatus.

Group 12.—Scientific, Photographic, etc.

Group 13.—Plastics.

Group 14.—Coin-operated Automatic Machines.

Group 15.—Foodstuffs, Beverages and Tobacco.

Group 16.—General and Sales Services Section.

London (White City).

Group 1.—Yarns and Fabrics.

Group 2.—Made-up Goods. Women's Wear.

Group 3.—Made-up Goods. Men's Wear.

Group 4.—Domestic and Decorative.

Group 5.—Furniture, etc.

Birmingham (Castle Bromwich).

Group 1.—Hardware, Ironmongery and Brassfoundry.

Group 2.—General Heating and Cooking (mainly by solid fuel).

Group 3.—Gas.

Group 4.—Building and Decoration, Public Works and Roads.

Group 5.—Metals (Ore and Semi-manufactured, excluding precious metals).

Group 6.—Transport.

Group 7.—Mining.

Group 8.—Engineering.

Group 9.—Electricity.

Group 10.—Services.

FINANCE.

UNITED KINGDOM FINANCE AND COMMERCE.

By a Special Correspondent.

The half year that has just closed has once more demonstrated the essential soundness and prosperity of the United Kingdom banking system. It is not, of course, maintained here that there has not been some decline from the high standard of prosperity of, say, five or six years ago. In the present world slump, a slump of such severity that world export trade has fallen by something like two-thirds of its value in about three years, it is understandable that banking, which thrives on foreign trade, is doing extremely well if it only holds its own. The figures for the first half of 1933 show that the United Kingdom banks have in no essential particular been shaken, and that they are in a strong position to take advantage of the trade revival, which so many signs portend for the near future.

Much of the soundness of United Kingdom banking arises from its structure. It is so organised that it avoids the waste and insecurity due to a multiplicity of units, which in turn leads to injudicious competition for business, while, on the other hand, it escapes the evils that are inherent in monopoly. The banks in the United Kingdom are organised in two groups of five banks, at the head of which, and outside these groups, stands the Bank of England—the Bankers' Bank. The first group consists of the " Big Five " banks, these being (in alphabetical order) Barclays, Lloyds, the Midland, the National Provincial and the Westminster. The other five banks need not be mentioned by name as their business, while both sound and prosperous, is on a relatively much smaller scale. It is to the reports of the Big Five banks that the commercial community looks for an indication of the whole country's economic well-being.

In a rough and ready way this is shown by their half-yearly dividends. The midsummer dividends, being only interim, are naturally not so conclusive a guide as the final dividends at the year end. It is, however, good to notice that after one of the leanest six months on record two of the Big Five banks have deemed it expedient in their half-yearly payments to restore in part the reduction in dividend of last year. In the cases of the three other banks there is no change. The recent interim payments, with those of a year ago and the final dividends for 1932, are as follows: Barclays, interim, 1932, 7 per cent.; final, 1932, 7 per cent.; interim, 1933, 7 per cent.; Midland, 8 per cent., 8 per cent., 8 per cent.; Westminster, 9, 9, 9; Lloyds, $6\frac{2}{3}$, $5\frac{1}{3}$, 6; National Provincial, 8, 7 and $7\frac{1}{2}$ per cent.

Closely associated with banking proper is the work of the discount companies. The three principal discount companies have also declared their dividends for the first half of 1933, and in each case the rates are unchanged. Here, too, the shareholders have reason for gratification, for the half-year just closed must have been the leanest period the money market has known for many years. The average discount rate for certain types of bills which was

£2 16*s*. 6*d*. per cent. for the first half of 1932 had sunk to only 13s. 3*d*. per cent. for the past six months. On short loans and bills the rates earned by the banks have, it is calculated, fallen far short of that necessary to cover expenses.

The most remunerative source of banking income is, generally, that earned on advances. Here, again, the return has been very small in the last six months. Not only has the rate on advances been lower than in the same period last year, but the amount that it has been possible to lend has been substantially less. This has led to the banks increasing largely their portfolios of investments, and at the present moment they have a greater proportion of their assets in this form than has been the case for a number of years. To give one example only, which, however, is illustrative of the rest, the additional investments of the National Provincial Bank have increased from less than £40 millions to nearly £70 millions. Happily there has been in recent weeks an improving demand for advances, and there are good grounds for believing that this tendency will continue. There could be no more certain indication of improving trade than an expansion of this form of banking activity.

NEW COMPANIES.

Breval Forest and Railway, Limited.

This has been registered as a private company with a capital of £100,000 for the purpose of acquiring concessions in Yugoslavia or elsewhere, and in order to carry on the business of timber merchants, owners of docks, railways, etc. Registered office, 6, Queen Anne's Gate, S. W.

Associated Agricultural Processes, Limited.

This private Company has been registered with a capital of £50,000 with the object of carrying on the business of manufacturers of all kinds of agricultural and vegetable substances and preparations, machinery, etc. The directors are: John Gray (director, Southern Cross Trust Company), Owen B. Howell, Hugh Beaver. Registered office, 84, Chancery Lane, E. C. 2.

Morris Industries Exports, Limited.

This firm was registered as a private Company on 18th July, with a capital of £250,000 with the object of conducting business as exporters of motor cars, cycles and vehicles, ships, airships and flying machines, etc.

Sir William R. Morris is permanent governing director.

Compressed Paper Packing, Limited.

A new packing material capable, on the admission of those who use it, of reducing breakages by 75 per cent. is an obviously important industrial departure. When, in addition, it can be shown to be produced at prices to compete with older-fashioned substances, while offering further advantages in the shape of improved protection against changes of temperature, reduced transport charges because of lighter weight and applicability to a wide range of fragile articles, then the industry is eminently worth setting up in the United Kingdom.

These are the claims made for the product of a company which has recently been formed under the style of Compressed Paper Packing, Limited. The Board of the company includes representatives of industries which would use the new product largely. Sir James Calder, a director of the Distillers Company, and other brewing and distilling companies, is chairman. With him will be associated, among others, Mr. William J. Barnett, a director of Schweppes and Kia-Ora, and Captain Bernard Daly, a distillery director.

The share capital is £120,000 in 5*s*. shares.

Bally and Haldinstein, Limited.

This is a private Company which has been formed with a capital of £120,000 with the object of carrying on the business of boot and shoe manufacturers, etc. Directors: Max Bally (Chairman); Ernest Norton; Marc A. Oboussier and Herman R. Stirlin (appointed by Societe Anonyme C. F. Bally) and George E. Haldinstein; William R. Howell and Harold N. Morgan (appointed by G. E. Haldinstein).

AMALGAMATIONS.

Steel Merger.

Full details are now available of the scheme for the reconstruction of Dorman Long & Co., and the amalgamation with the South Durham Steel and Iron Company.

Provision has been made for securing fresh finance in order to carry out the scheme and to provide additional working capital.

The present holders of Dorman Long £5,135,944 Five and a Half per cent. debentures are to receive £2,567,972 Five and a Half per cent. debentures with modified rights, £1,540,783 Six per cent. Non-Cumulative Preference and £1,540,783 Six per cent. Preferred Ordinary shares. The £883,918 Six per cent. Cumulative Preference shareholders are to receive £662,939 Six per cent. Preferred Ordinary shares.

The £2,052,746 Eight per cent. Preferred Ordinary shareholders are to receive £256,593 Six per cent. Preferred Ordinary shares.

The £8,311,482 Ordinary shareholders are to be given £831,148 Ordinary shares in the new company.

INCREASES IN CAPITAL.

	£
Somervell Brothers, Ltd. (boots and shoes)	40,000
Pharmaceutical Products, Ltd.	299,000
The Whitehead Iron & Steel Company, Ltd.	140,000
Shipley Collieries, Ltd.	200,000
Imperial Typewriter Company, Ltd.	110,000
Inveresk Paper Company, Ltd.	1,572,099
The Yorkshire Brick Company, Ltd.	200,000
Asiatic Petroleum Company, Ltd.	15,000,000
English Clays Lovering Pochin Company, Ltd.	2,240,225
Edward Lloyd, Ltd. (paper, etc., manufacturers)	1,000,000
Joshua Tetley & Son, Ltd. (Brewers)	1,100,000
Yeast-Vite, Ltd. (patent medicines)	300,000
Rockware Glass Syndicate, Ltd.	100,000
North Western Road Car Company, Ltd.	150,000

CONTRACTS SECURED.

ORDERS FROM EGYPT.

A contract to supply the Egyptian Ministry of Agriculture with 70 tons of sodium cyanide has been awarded to the Imperial Chemical Industries. Other contracts awarded by the Department of Public Health, Egyptian Ministry of the Interior, are as follows:—

	£
Chas. F. Thackray, Leeds . . . . Johnson & Johnson, Slough, Bucks (Catguts) .	1,200
Jeyes Sanitary Compounds Co. (Disinfectants)	2,400
F. W. Berk & Co., London (Medical Oils) .	1,800

Warsaw Junction Electrification Contract.

An important contract has been signed in London between the Polish Under-Secretary of State in the Ministry of Finance M. Koc (chief Polish delegate to the Monetary and Economic Conference), on the one hand, and the English Electric Company, Limited, and Metropolitan-Vickers Electrical Company, Limited, on the other.

The contract, which amounts to about 60,000,000 zlotys (£1,980,000) is for the electrification and completion of the main Warsaw Railway Junction. The work is to be carried out during the next four years, and part of the equipment will be supplied by the two British firms.

Coal for Latvia.

The Riga Municipality has ordered 38,000 tons of Northumberland coal of Dawison, Cowpen or Bothal brands and 5,000 tons of gas coal, New Leverson brand.

New Train Ferry to Continent.

The Southern Railway recently placed an order with Messrs. Swan, Hunter and Wigham Richardson, of Newcastle-on-Tyne, for the construction of three train ferry vessels, to be delivered in about 12 months' time. The vessels will run between Dover and Dunkerque, and considerable works are to be put in hand at both ports to meet the requirements of the train ferries, which must be able to load or unload trucks at all states of the tide

Electrical Equipment for Nepal.

The English Electric Company, Limited, has received through its local branch an order from the Government of Nepal for a water turbine driven alternator set of 450 kilowatts normal rating, together with a step-up transformer, switchgear, small transformers and miscellaneous equipment. This plant is required for a new hydro-electric power house being constructed at Sunderijlal about 8 miles N. E. of Khatmandu.

IRON AND STEEL.

The conditions reported last month in the iron and steel trade continue to be maintained and in spite of the approach of the holiday season the industry is in a much better position than was the case at the beginning of the year. Export trade still fails to show any great improvement, but the uncertainties in the World Economic situation are mainly responsible for the contraction of overseas business. Inquiries are, however, more frequent and with the return of confidence it is to be expected that export trade will improve more rapidly.

The National Federation of Iron and Steel Manufacturers reports that there were 72 furnaces in blast at the end of June, the same number as at the beginning of the month. The production was 345,600 tons of pig iron compared with 339,900 tons in May and 311,400 tons in June, 1932. The output of steel ingots and castings in June was affected by the Whitsun holidays but amounted to 568,000 tons compared with 599,600 tons in May and 459,300 tons in June, 1932.

Imports of iron and steel in June were 69,019 tons against 84,927 tons in May and 126,017 tons in June, 1932. The decreases in both import and export trade are partly accounted for by the fact that there were fewer working days in June than in May. The total tonnage of iron and steel and manufactures thereof exported in June, was 153,787 which is about 25,000 tons less than in the immediately preceding month, but 6,500 tons more than in June, 1932. Slight increases were in fact recorded in the case of steel bars, strip and plates over $\frac{1}{8}$, but in the majority of the individual items including such important export commodities as tinplates, galvanized sheets, tubes and railway material, more or less sharp falls are recorded.

LARGE PASSENGER ENGINES.

New L. M. S. Type.

The London Midland and Scottish Railway Company have completed at Crewe the first of three giant new locomotives of the 4—6—2 type, which have been designed by Mr. W. A. Stainer, chief mechanical engineer, for service on the heaviest expresses between London and Scotland.

Whereas the maximum load for the Royal Scot type unassisted has been 420 tons, the new engines are intended to haul trains of up to 500 tons without assistance, and they will make it possible to avoid the duplication and piloting of trains during the busy season which has been necessary hitherto. They will develop, at 85 per cent. boiler pressure, a tractive effort of 40,300 lb. The boiler has a firegrate area of 45 square feet and a total heating surface, excluding superheater, of 2,713 square feet. The working pressure is 250 lb. The development of the high tractive effort has been made possible by the employment, in conjunction with the large capacity boiler, of the four-cylinder simple expanding arrangement, providing good balancing with a load of 22 tons 10 cwt. on each of the three driving axles. The tender, which is carried on three roller-bearing axles, has a capacity of 4,000 gallons of water and nine tons of coal. The total weight of the engine and tender in working order is 158 tons 12 cwt. and the overall length is 74 feet 4¼ inch.

AUTOMOBILE AND ALLIED TRADES.

LONDON TRAFFIC BOARD.

By a Special Correspondent.

By the coming into operation of the London Passenger Transport Act on the first of July a new record was created in municipal traffic enterprise. Through that Act a London Passenger Traffic Board was created, with control over nearly all the passenger transport undertakings within a radius of 30 miles of Charing Cross. The working of the new combine will affect 9,500,000 people living in an area of approximately 1,700 square miles. As far as the public is concerned, for the time being the railways, omnibuses, and tramways will function as usual. The change-over is in the matter of administration and control. This, instead of being in the hands of competitive private concerns, will be the care of the Board, a semi-public body whose first job will be the co-ordination of all the services, the elimination of wasteful competition, and the guaranteeing of adequate services for the public.

Like every other revolutionary undertaking, the linking up of the 89 undertakings involved is not the work of a moment or even of a few years. The idea of co-ordinating London traffic is nearly 80 years old. It began with the forming of the London General Omnibus Company in 1855. The Company's intention was to obtain control of all the London omnibuses, which carried nearly the whole of the passenger traffic. The passing of the Tramways Act in 1870 brought into existence the various metropolitan tramway systems, which played so large a part in subsequent transport development. The London County Council system, now taken over by the new Board, covers 167 miles of route and carried 700,000,000 passengers a year. Its staff numbers 13,000, and its salaries and wages bill totals about £2,500,000 a year.

It had for long been realised that every railway system in London should come under one management, but it was only comparatively recently that Lord Ashfield, by means of the Underground Electric Railway Company of London, was able to secure something approaching completion of this task. Steadily the work went on under the pressure of economic necessity in the transport industry. The coming of the motor-bus helped for a time in the work of co-ordination—though in 1922 there was a new outburst of independent activity, and competitive enterprises sprung into being.

The 89 undertakings which have now been absorbed by the new Board comprise five railways, 14 tramways, 62 omnibus concerns, four coach companies, and four subsidiary undertakings. Their total capital is approximately £120,000,000. The passenger carrying vehicles taken over number 11,430—Underground Railway coaches, 3,000; omnibuses, 5,350; coaches, 420; trams, 2,600; and trolley omnibuses, 60. The total number of staff employed is 71,900, and the number of passengers carried in 1932 was 3,463,000,000.

One interesting feature of the powers conferred on the new Board is that they may run a river service. Early in the present century there was a service of steamboats run by the London County Council. Of late years there has been some agitation for a new " Water-Bus " service on the Thames, and this has found a certain amount of influential support; but such a project will no doubt be held subordinate to the more immediate work of the Board. That work is the development of the present serby the Society of British Aircraft Constructors, is noticeable in sections of the United Kingdom aircraft industry. In one day—June 26—at Hendon aerodrome no fewer than 46 aeroplanes, representing 44 distinct types of modern civil and military flying machines, were paraded for the inspection of some 1,500 guests. Aviation experts from more than 60 countries inspected the craft and watched them fly; an impressive " static " exhibition of engines, parts and materials in a large hangar alongside the flying field attracted most of them during some part of the day.

In the days immediately following, many of the Society's guests from overseas made tours of inspection of United Kingdom aircraft and aero engine factories. In other words, the demonstration of the quality of United Kingdom matériel which was begun at Hendon on the Monday was continued for the rest of the week in the factories, and on the aerodromes, of individual firms. There is reason to believe that orders of some importance may result.

The triumph of the 1933 Display, admitted to overshadow the very considerable success which attended the first Display of the kind last year, has fully justified the enterprise of the Society in forsaking the stereotyped and costly " static " exhibition, held over a period of two weeks or more in a large hall in the metropolis, for the " dynamic " show possible at an aerodrome. The qualities of the flying machine cannot be appreciated till the craft be seen moving in its own element.

No definite announcement can yet be made about next year's plans but a repetition of the Display is likely. In that event, the Society's Third Display would probably be held towards the end of June, 1934. All potential buyers of any kind of aircraft matériel are asked to observe this date; the Display is an entirely private function, open only to those people seriously interested in aviation who are invited by the Society, but invitations would be sent with pleasure to potential buyers and others who might be able to visit England near the end of June next year. The present intention is to announce plans for 1934 early next year.

The demonstration flying in the morning—two hours of perfect evolutions by some of the world's best pilots—brought the spectators to their feet in admiration. A leading French aeronautical journalist, M. Peyronnet de

Torres, declared in the Paris newspaper " L'Intransigeant " that French pilots who were present at Hendon were absolutely " knocked sideways " (absolument sidérés) by the performance of the new single-seater interceptor fighter, which, with a maximum speed of 250 m.p.h., is stated by the Air Ministry to be the fastest military aeroplane in the world. He eulogised the tremendous speed and power of manœuvre of the aeroplane, its easy landings at slow speeds and perfect manœuvrability. Nor were the other craft demonstrated outshone. Each in its category displayed qualities of flying efficiency and ease of control which are not found to higher degree in any aircraft designed and constructed abroad.

Among the 44 different types of aeroplane on view were 20 military aircraft, eight training 'planes, two world record holders, and 13 machines designed for commercial or private flying. One experimental aeroplane built to demonstrate the qualities of automatic wing-slots and two " flying test beds " for new compression-ignition (oil-burning) engines completed the tale. With the exception of the pure flying-boat or floatplane every kind of aeroplane built by the United Kingdom aircraft industry was represented.

Thirty-nine firms took space in the " static " exhibition, nearly double the number that participated in 1932. This year the exhibition was better housed, the large transport hangar providing accommodation greatly superior to the two small tents employed 12 months ago.

Space does not permit reference to all of the craft on view. The new single-seater fighters, designed primarily with the defence of London and similarly located areas in mind, attracted much attention; it was noticed that in speed and rate of climb there appears little to choose between those with air-cooled radial and those with water-cooled units. Other of the military machines—the two-seater fighters, " general purpose " aircraft, the night bomber, the troop-carrier and the torpedo-bombers—were to the expert eye equally efficient. Wide speed range, resulting in some of the machines on view from the use of automatic lift slots, was a general feature of all of them. Their relatively slow landing speeds were admired; this characteristic of all United Kingdom aircraft is not shared by all of the products of foreign constructors.

Civil craft ranged in size from one of the new four-engined monoplanes in the Imperial Airways fleet down to single-engined light aircraft. A new twin-engined light cabin monoplane had landing wheels which are retractable within the wings in flight. Of the eight training craft all except one, a modified single-seater fighter intended for the advanced instruction of army pilots, are adaptable for flying club, private and other uses. Fastest of the civil craft on view was a mail-carrying biplane capable of a maximum speed of about 200 miles an hour.

Three amphibious flying boats struck the marine note. Their pilots demonstrated in impressive fashion the ease with which the wheels may be let down for landings or drawn up into flying position beside the hull. Recently the Air Ministry has placed its first considerable order for amphibious craft; the scope of this kind of flying machine is widening.

The two biplanes powered with oil-burning units were especially interesting in that they permitted comparison between air-cooled and water-cooled motors working on the compression-ignition principle. The air-cooled oil engine, of 350-380 h.p., is actually the most powerful air-cooled compression-ignition engine which has yet been flown in the world. Its weight in proportion to power output—about 2½ pounds per horsepower—and low fuel consumption afford clear indication of the important progress that British engineers are making in this difficult but invaluable branch of aero-engine development.

Two machines which hold "supreme" world records set the seal of high achievement on the Display. One was the long range monoplane in which two Royal Air Force pilots, Squadron Leader O. R. Gayford and Flight-Lieutenant G. E. Nicholetts, flew non-stop 5,309 miles from Cranwell, Lincolnshire, to Walvis Bay, South-West Africa. The other was the biplane flown by Mr. Uwins to a height greater than any previously attained by a heavier-than-air flying machine—43,976 feet, reached in the course of an engine test flight above Gloucestershire last autumn.

BRITAIN'S FASTEST MAIL CARRIER.

By a Special Correspondent.

The fastest United Kingdom transport aircraft, the Bolton-Paul Mail Carrier, which was ordered by the Air

Ministry a year ago, has now completed two trial flights. With the engines turning much below their maximum speed it flew at 170 miles an hour. Its highest attainable speed will be about 197 miles an hour and its normal cruising speed at 5,000 feet altitude is expected to be over 170 miles, which is 20 miles an hour in excess of the speed demanded by the Air Ministry. In appearance the machine is unusual in a few broad features, but a closer examination shows a myriad ingenious details all contributing to its general efficiency.

In an enclosed cockpit equipped with complete dual flying controls is room for the two pilots. Aft of the cockpit is a spacious chart-room, including accommodation for one of the pilots to lie down for rest. Immediately behind the chart-room is the mail compartment with a total space of 175 cubic feet, which is approximately twice the amount of space needed for storing the 1,000 lbs. weight of mail—40,000 letters—required in the Air Ministry specifications. On the floor is a trapdoor through which mails can be dropped by parachute, and provision is made for the fitting of gear to pick up mails without landing. The machine has a wing-span of 54 feet, and engines capable of developing 1,250 horse-power. With a full load on board it will weigh 10,500 lbs., which will include the full mail load and fuel for a 1,250 miles non-stop flight. When its test flights have been completed, it will probably be put on a demonstration flight to Australia, which it should reach with ease in less than a week.

BRITISH CIVIL AVIATION.

By a Special Correspondent.

That the British public is becoming rapidly more "airminded" is evident from the continued progress of civil aviation in the United Kingdom. According to the latest annual report issued by the Air Ministry, the statistics show that new records were created last year in the number of passengers carried by undertakings engaged in commercial aviation. At the same time United Kingdom aircraft are becoming more efficient and more capable of coping with increased traffic and larger loads. For, although the number of flights by United Kingdom aircraft was slightly less than during 1931, the number of passengers carried showed a really remarkable increase; the total for 1932 being 41,609, as compared with 21,925 during the previous year.

A gratifying feature of this particular traffic is that the increase of passengers carried by machines of United Kingdom manufacture was considerably greater than that achieved by any other nationality on the cross-channel services. Of the total number of passengers carried across the channel by air last year, 59 per cent. were carried by United Kingdom aircraft, as compared with 48 per cent. in 1931.

The Imperial Airways operations last year broke all previous records. The statistics are given in two parts. The first deals with "Air Transport," and the second with "Other flying for hire". The latter part does not cover operations outside Great Britain, and it includes such flights as local pleasure flights, etc. Compared with the figures for 1931, the number of individual passengers carried last year in the course of "Air Transport" operations and "Other flying for hire" show increases of about 125 per cent. and 183 per cent. respectively. The figures for August, 1932, the "peak" month for both classes of flying, reached the high totals of 10,403 and 101,740.

Other comparative figures are of interest. Thus we find that under the heading of "Air Transport" there were 11,468 aircraft flights last year, as compared with 7,814 in 1931. The aircraft mileage flown last year was 2,090,000 as compared with 1,604,000 in 1931; and the total number of passengers carried was 56,683 as compared with 25,211 in 1931. In "Other flying for hire," there were 97,998 aircraft flights in 1932 and only 71,350 in 1931; the aircraft mileage flown was 1,029,000 last year and only 522,000 in 1931; and the total number of passengers carried was 389,280 as against only 137,407 in 1931.

The present dislocation in world trade was responsible for a curious development in the air-borne goods traffic. The cargo carried by Air Transport last year was approximately the same as that carried during 1931, but the total value was lower. There was a large increase in the value of exports and re-exports, but a great decrease in the value of imports. The value of the former rose from £773,958 in 1931 to £1,142,146 in 1932, while the value of imports declined from £2,022,522 to £981,143. In comparing these figures, however, we must bear in mind the general decline in price levels.

The air mails last year were remarkably successful. The weight of letters alone sent by air from Great Britain exceeded all previous records. In 1931 great satisfaction was felt when it was found that 52½ tons of letters had been carried; but last year this was exceeded by 11½ tons. The largest figure recorded for a single British flight was on the 10th December last year, when a ton of mail was carried; and the Christmas air mail to India alone during last December weighed three tons. The parcel air mails showed a slight decrease in weight last year as compared with the previous year, but in spite of this the total weight of all air mails sent from Great Britain last year was 121 tons, as compared with 115 tons in 1931.

An important feature of last year's development was the inauguration of a number of internal air services, run entirely by private enterprise. New air lines have been organised between places which have not been well served in the past by other transport services, and they have therefore every chance of success. This feature of United Kingdom civil aviation is only in its infancy; but during the past two years manufacturers have produced some efficient types of small and economical aircraft, and it is expected that there will be rapid developments in this particular field.

THE BIRMINGHAM JEWELLERY INDUSTRY.

ITS HISTORY, SCOPE, EQUIPMENT AND OUTLOOK.

Furnished by The Birmingham Jewellers' and Silversmiths' Association.

In writing of the development of the Birmingham Jewellery and Allied Trades, reference must be made to the tremendous significance of two important dates in their history.

These are the dates, 1773 and 1887; the former, the year in which Birmingham was first appointed an Assay Town; the latter, that in which the Birmingham Jewellers' and Silversmiths' Association was formed.

Centuries before 1773, however, jewellery and plate were made in Birmingham, though it was this establishment of an Assay Office that caused its ultimate development to an industry of importance, and the founding of the Association that undoubtedly enabled Birmingham, through co-operation of its manufacturers, to become the organised centre of the Precious Metals and Gems Industries.

Jewellery was worn to a certain extent during the reigns of Elizabeth, James I. and Charles I., but not during the Civil War and the Commonwealth. With the return of the Stuarts it came into fashion again, and the real founder of the trade in Birmingham was Charles II., who brought with him from the Continent the habit of wearing buckles, clasps, chains, lockets and buttons.

We do not hear of the trade again till 1770, when the " Tradesmen's True Guide " contains a list of jewellers, of whom it says, " The Artists hold the first rank among the merchants for the elegance of their work."

The important development of the opening years of the last century was the separation of the trade from all others and its establishment as a distinct industry.

In 1825, with the depression following the Napoleonic wars, the Jewellery Trade nearly disappeared, and did not recover completely till 1837, when, with the accession of Queen Victoria and the prospect of a long and prosperous reign, the wearing of a considerable amount of jewellery became the vogue.

Silver-plated goods were being made in Birmingham by Mathew Boulton as early as 1764. This method of plating was a process similar to that employed in the manufacture of " rolled gold " at the present time. Sheets of silver and copper were clamped together, welded together in a furnace, and then rolled down into sheets. Articles made of this metal are now known to collectors as " Sheffield plate ".

From the notes in Timmins it appears that development in this trade did not come till the beginning of the nineteenth century. In 1796 Thomason, who had been trained at Soho, set up on his own in Church Street as a maker of silverplate goods. In 1808 Thomas Ryland, who, it is interesting to note, came from Sheffield, established the firm of Ryland & Waterhouse, which manufactured silver-plated goods until 1829. These firms formed the nucleus of the new trade which prospered until 1840, when the great revolution came, due to the invention of the process of electro-plating.

Shortly after 1860 we see a new line of development. Silver jewellery had been manufactured before this, but in comparatively small quantities, because silver was a dear commodity, having risen in price since the gold discoveries. Therefore, while the production of gold jewellery had increased, that of silver jewellery had decreased, and in other branches silver had been replaced by electroplate.

By 1866, the Jewellery Trade was one of the largest industries of the town, employing 7,500 persons, turning out large quantities of gold jewellery and electro-plated wares, a less amount of gilt jewellery, and a small quantity of silver jewellery.

At this date the making of articles of gold and silver was a "craft" and the employees were all possessed of skill of a particularly high level. Generally speaking, they were the best paid of Birmingham artisans, and—as at the present time—they lived in comfortable dwellings in the suburbs, and, from the cleanly nature of their occupation, could wear better clothes than most artisans.

The fluctuations of the trade during the 20 years following 1866, were bound up with the rise and decline of the fashion of wearing silver jewellery.

The trade was at its height in the boom of 1872, when many new factories were built, and during the period of exaggerated prosperity the production was in excess of the demand. The decline came about as a result of the continued fall in the price of silver, the debasing of artistic quality of the silver jewellery and the excessive use of machinery in its production.

Though the gilt and imitation jewellery section of the trade remained stationary between 1866 and 1886, many technical improvements were introduced. There were, for instance, improvements in gilding which by the electric process was now done with increased economy and skill. An interesting process was the "sand blast" for imitation jewellery, introduced by the firm of B. J. Round & Sons. By submitting gilt jewellery to this sand blast process a finish was obtained similar to that of "coloured gold" jewellery. Machinery was introduced in this branch about 1870. In 1874, the trade began to suffer competition from America, which country exported to England cheap imitation jewellery made by machinery.

A feature of all jewellery branches was the enormous increase in the use of precious stones. It was estimated that, compared with 1865, the sales of diamonds and other gems in 1886 were 20 times larger.

That "extremes lead to reaction" would apply with especial force to the extraordinary development of co-operation among manufacturers after 1886. The conditions of the trade in 1885 and 1886, speculative and often dishonest trading, price cutting, and reckless competition destructive of art, and bankruptcy proceedings carried on without proper supervision, punishment of offenders, or organisation of creditors, represented the extreme of disorganisation. Yet the Birmingham Jewellers' and Silversmiths' Association, which was formed in 1887, represented the first organised body of a permanent nature in the trade.

After the boom in 1900, the trade fell off a little during the first few years of the century, but improved somewhat in 1906, but 1911 marked the beginning of a period of prosperity which continued till 1914.

Taking 1913 as the peak of the boom, the question must be asked, what was the net result to the trade of 13 years development? In the first place, the trade, as a whole, had expanded enormously. Various estimates have been given of the number employed by the trade in 1913. These range from 40,000 to 80,000, and, in point of view of the number employed, the Jewellery Trade was the second industry in the city, coming next to the group of non-ferrous metal trades. Cheap jewellery 20 years before had formed the greater part of the product of the industry. The position in 1913 was reversed, and the output of high class jewellery exceeded in value at least that of cheap jewellery.

The after-war boom began in 1918, when raw materials were available in sufficient quantity to keep the depleted labour of the industry fully employed. The prosperity of the gold-chain section of the trade, due to the high wages in the mining districts, the beginning of the wrist-watch fashion, a large demand for enamelled goods and the increased use of platinum were features of these years. 1919 brought a further expansion of the trade, which continued until the depression began in the spring of 1920 following shortly after the exceptionally good Christmas trade of 1919.

Having mentioned the pre-war developments in the directions of integration and variety of production, it now remains to describe the present position in this respect. The present organisation of the trade may be described as follows: In each section there is a small number of comparatively large firms producing a variety of articles and including under the one roof as many as possible of the processes of manufacture. Attached to each of these is a large number of small firms and outworkers who do work for the firm. The early processes involving the preparation of the raw material are seldom done by the firm. It will buy its nickel-silver from the rolling mills already alloyed and rolled to the required gauge and width. Casting, likewise, is given out to other firms.

As compared with those in other trades, jewellery firms are comparatively small, using little machinery and producing on a small scale. A firm employing 150 persons would be considered one of the largest and most developed in the silver trade and electro-plate trade, while the largest firms in the best jewellery section employ only about 40 men. Cheap and Imitation jewellery firms occupy an intermediate position in this respect, but conditions in this section are so abnormal at the present time that it is hard to form a conclusion of this kind. Watch-case making by machinery occupies a place by itself, since it is the only section where a standard article is turned out on mass production lines.

In spite of the developments of the last 20 years the trade is still one which employs remarkably little power. The larger firms of stampers employ most power, their shops being miniature engineering works, equipped with heavy power presses, capstan lathes, planing machines, etc., of the latest pattern. Firms of rollers and wire-drawers come next, using a large amount of heavy machinery. Silver and Electro-plate works occupy next place, using power to drive stamps (but not presses), small lathes, and polishing and finishing bobs. Imitation jewellers use a large number of machines, but many of them are small and operated by hand. On the other hand, even the largest of high-class jewellery firms use little or no power-driven machinery, a few finishing bobs driven by a small electric motor being all that is usually required. Gas engines supply most of the power required in the Jewellery Trade. Regarding modern developments in this respect it may be said that there is a tendency towards the increased use of power-driven machinery in all operations where such machinery will not lower the artistic value of the goods. This tendency was most marked during the post-war boom among manufacturers who had been engaged on munition work and had been struck by the value of power-driven machinery in this work.

CATALOGUE LIBRARY.

The undermentioned catalogues relating to United Kingdom manufacturers have recently been received and may be consulted by *bonâ fide* firms or individuals at the Office of His Majesty's Senior Trade Commissioner in India, Fairlie House, Fairlie Place, Calcutta.

Names and Addresses.	*Description.*
* Siebe, Gorman & Co., Ltd., Westminster Bridge Road, London, S.E. 1.	Diving Apparatus, Fire Extinguishers, Breathing and other Safety, Protective and first-aid Appliances, Pressure Gauges and other instruments for Aviation.
W. T. Henley's Telegraph Works Co., Ltd., Holborn Viaduct, London, E.C. 1.	Rubber insulated and fire-resisting cable, Paper Insulated Cables to new B. S. I. Specification; Wiring Systems, Power, Feeder and Distribution Cables. Overhead line materials and jointing materials. Joint Boxes, Terminal Boxes, Distribution Pillars, Fuse Boxes.
J. M. Wotherspoon & Co., Ltd., 194-200, Bishopsgate, London, E.C. 2.	Spirit Measuring Taps.
Robert Boby, Ltd., Bury-St. Edmunds.	Materials Handling Plant.
Trilos, Ltd., St. Annes-on-Sea.	"Trilo" Game.
* Johnston Brothers (Contractors), Ltd., London House, Crutched Friars, London, E.C. 3.	Road Making Machinery.
Tangyes, Ltd., Cornwall Works, Birmingham.	Steam Engines and Boilers, Heavy Oil Engines, Lifting Appliances, Hydraulic Machinery, Fuel Oil Engines, Electric Lighting Sets, Steam Pumps, Turbine Pumps, Diesel Transport Engines.
Hickson & Welch, Ltd., Ings Lane, Castleford.	Wood Preservatives.

Names and Addresses.	*Description.*
C. A. Parsons & Co., Ltd., Newcastle-on-Tyne, 6.	Descriptive Booklet of the works of C. A. Parsons & Co., Ltd.
Kryn & Lahy (1928), Ltd., Coborn Works, Letchworth, Herts.	"Stronger Steel."

*Catalogues marked with an asterisk have also been received in the Office of His Majesty's Trade Commissioner, 3, Wittet Road, Ballard Estate, Bombay, where they may also be consulted by *bonâ fide* firms or individuals.

In addition, His Majesty's Trade Commissioner, Bombay, has recently received the undermentioned catalogue:—

Name and Address.	*Description.*
Dictograph Telephones, Ltd., Aurelia Road, Croydon, Surrey.	Intercommunicating Telephone System, Switchboards, etc.

MGIPC—L—249HMTC—13-9-33—1,050.

H. M. TRADE COMMISSIONERS IN INDIA.

Calcutta—

Sir Thomas M. Ainscough, C.B.E.,
His Majesty's Senior Trade Commissioner in India and Ceylon.

Mr. R. B. Willmot,
His Majesty's Trade Commissioner at Calcutta.
Post Box No. 683, Fairlie House, Fairlie Place.
Telegraphic Address.—" Tradcom, Calcutta."
Telephone No.—" Calcutta 1042."

Bombay—

Mr. W. D. M. Clarke,
His Majesty's Trade Commissioner at Bombay.
Post Box No. 815, 3, Wittet Road, Ballard Estate.
Telegraphic Address.—" Tradcom, Bombay."
Telephone No.—" Bombay 23095."

Ceylon—

Imperial Trade Correspondent,
The Principal Collector of Customs, Colombo.

With Compliments.

SEPTEMBER 1933

The
Commercial Bulletin

A Monthly Review of Official and other
announcements relating particularly
to British Export Trade

Issued by
HIS MAJESTY'S SENIOR TRADE COMMISSIONER
IN INDIA AND CEYLON.

FAIRLIE HOUSE,
FAIRLIE PLACE,
CALCUTTA.

CONTENTS.

PAGE.
GENERAL 1
BRITISH INDUSTRIES FAIR, 1934 3
FINANCE 4
CONTRACTS SECURED 8
SHIPBUILDING 11
IRON AND STEEL 12
AUTOMOBILE AND ALLIED TRADES 13
TEXTILES 14
MACHINE TOOLS 17
AVIATION 18
CATALOGUE LIBRARY 21
TRADE ENQUIRY 23

GENERAL.

The advance of United Kingdom trade, which for some time past has manifested itself in a number of industries, seems to have taken on the character of a general and progressive improvement. While anything in the nature of a trade boom is neither anticipated nor desirable, the business graph in practically all branches has moved steadily in an upward curve.

The July trade returns show improvement over those of the previous month, for imports are well maintained at £53·7 millions against £53·8 millions in June, whilst exports of British goods have increased from £28·5 millions to £29·8 millions. The July returns also record an improvement over those of July last year, this being particularly striking in the case of re-exports. Another encouraging feature is the rise in raw material imports of £14·9 millions against £14 millions in June, and only £10·8 millions in July of last year. Coal and iron and steel exports have held their own, and there have been noticeable improvements in exports from the woollen, linen and leather trades, and in those of railway material, locomotives and motor cars.

In the 12 months ending July 24th, there has been an increase of 549,000 in the total of insured persons at work, the total being approximately 9,800,000. This was 8,000 more than in the previous month.

In spite of the holiday season the recent improvement in employment was continued in the following industries, manufactures and services:—iron and steel, engineering, ship-building and repairing, shipping, docks and harbours, metal goods, woollen, worsted and hosiery industries, and in the hotel industry.

General reports show that in South Wales the export of anthracite and steam coals has expanded, while the production of steel in one year has risen from 101,300 to 153,000 tons. In Leicester, the centre of the hosiery trade, business is said to be brisk, unemployment decreasing and prices rising. In the Northampton boot trade unemployment has fallen in 7 months from 6,000 to less than 700, and some of the factories are working 24 hours a day. Sheffield, which during the war employed an additional population of 40,000 workers to cope with the demand for war material, has found employment for three-quarters of these workers in its own industries.

Motor car manufacturers are doing excellent business, one firm reporting 22 per cent. increase in production since June, 1932, while another has beaten its own record of last year when it was unable to deliver all the cars on order. Spain furnishes the latest evidence of the ascendancy attained by United Kingdom motor car manufacturers in overseas markets. In 1931 Spain imported from the United Kingdom a total of 97 private cars to the value of £11,296. In 1932 the total was 955 cars valued at £120,376, and in the first five months of this year 1,173 cars to the value of £145,999 were exported to that country.

LATEST SUCCESS OF BRITISH DYESTUFFS.

It might be thought that the application of dyestuffs to natural flowers savoured of painting the lily. Yet in the last few years, market gardeners and others have found that flowers such as white marguerites were much easier to dispose of if dyed. By colouring such flowers, not only is it possible to sell an attractive article but an outlet is found for what may become an unmarketable article.

Naturally not all dyestuffs are suitable for such a purpose, but as a result of experiments and careful selection the Dyestuffs Group of Imperial Chemical Industries have now succeeded in placing on the market a range of dyestuffs which are suitable for the dyeing of flowers.

The application of these dyestuffs is extremely simple and needs no special apparatus. The stems of the freshly-cut flowers are immersed in solutions of the dyes. The flowers are left in the coloured solutions overnight, or until the desired shade is produced on the petals, after which the stems are rinsed in water to remove excess of dye solution. The actual flowers themselves should not be dipped into the colour. Not all flowers are equally amenable to colouring by this means, but remarkable success has attended experiments with a number of flowers, particularly marguerites and lilies. Not only do the dyes have no detrimental effect on the blooms, but in fact are usually found to prolong the life of cut flowers so treated. These new dyes are known as Floricol Colours.

TRADE IN AUTOMATIC TELEPHONE APPARATUS.

The recent campaign for developing the telephone habit in Great Britain, which has resulted in a considerable increase in telephone subscribers, has had a welcome effect in another direction. It has stimulated the trade in the production of apparatus which is now mainly of the automatic as opposed to the former manual type. The Automatic Electric Company of Liverpool are one of the four large makers of automatic equipment and have supplied such equipment to many parts of the world.

This company recently secured a contract for the conversion of the Kingston (Jamaica) manual telephone apparatus to the automatic system. Provision is made in the first instance for 1,900 lines, with an ultimate capacity of 3,000 lines. The necessary apparatus will be made at the firm's works at Liverpool, whence it will shortly be shipped to Jamaica and erected by the firm's engineers. Following upon a successful first year's programme of conversion to the automatic system in Poland, the company has now received an order for a second year's programme from the Polish Government. This order covers eleven exchanges, with a starting capacity of 7,500 lines and an ultimate capacity of 15,800. The full Polish conversion scheme will cost about £500,000. The firm has other conversion schemes abroad, including one at Johannesburg, South Africa, where so far ten exchanges, with an ultimate total of 36,800 lines, have gone over to the Strowger system.

BRITISH INDUSTRIES FAIR, 1934.

WHITE CITY TEXTILES EXHIBITION.

The steady improvement in Great Britain's position has not been without influence on the British Textile Exhibition. At the next British Industries Fair, of which the Exhibition is a section, numerous developments will be apparent which are indicative of the growing confidence in trade circles.

The representative character of the Textiles Exhibition has steadily increased since its inception in 1932 and next February it will be seen that further progress has been made in this direction. Favourable trade agreements recently concluded with other countries have no doubt encouraged certain manufacturers to show at the Exhibition for the first time, but, generally speaking, the development is due to a growing conviction that Britain's enhanced reputation has placed us in a position to obtain early benefits from the trade revival which is surely, if slowly, becoming apparent.

Perhaps the most noteworthy development in the Exhibition is in respect of men's wear. Britain's reputation for style in men's wear is pre-eminent and for some time there has been a feeling that the trade should be worthily represented in the British Industries Fair. Leading houses in the clothing and the shirt collar and tie trades have now combined to establish a Men's Wear Section which will be representative of the best productions in the United Kingdom.

The prosperity of the Yorkshire woollen industry is of vital national importance. It is hoped that every section of this great industry will be adequately represented in the next Exhibition. A large hall has been specially reserved, and famous Yorkshire firms have already determined to exhibit and thus take their place with other industries in the effort to bring back prosperity to the United Kingdom.

The Soft Furnishing Section, which was created as an experiment last February, has been extended and an even more attractive display at the next Exhibition is already assured.

The Scottish Hall, which was an outstanding feature of the last Exhibition, will again demonstrate the quality and variety of Scottish woollens and worsteds. Lancashire goods will be shown in great variety by firms famous throughout the trade, and Irish linen houses will once more group their exhibits to give added emphasis to their attractiveness and variety.

FINANCE.

U. K. FINANCE AND COMMERCE.

(By a Special Correspondent.)

The year 1932 was probably the most trying time in the long history of British insurance. In spite of the many difficulties, however, the British insurance companies have paid their way during the last twelve months; have earned a modest dividend for their proprietors;

and have added to their resources and reputation. It is perhaps not realised at all widely at what a small cost to the insuring public the great British insurance offices are conducted. As was pointed out recently by one of the chairmen of these companies, the average underwriting profit of the leading British insurance companies in the last few years has been less than four per cent.

If the shareholders of the companies had been dependent on the underwriting results of last year they would have fared badly. Their modest dividends have not been earned on the premium revenue but on the interest on the vast reserves accumulated by the companies in more prosperous times. When it is realised that some of the leading British fire offices were established well over 200 years ago and have always been conservative in the matter of dividends it will be understood what immense reserves have been accumulated.

This accumulation of reserves is worthy of a few more words of explanation. When, a few years ago, a number of new companies were formed under strong auspices all idea of paying dividends for the best part of ten years was put aside. In order to secure the necessary stability funds had to be accumulated not only to meet the ordinary year to year claims, but a claim such as might arise out of some great catastrophe. Such a policy appears to call for considerable fortitude on the part of shareholders in insurance companies, but in the long run the policy in question is advantageous to them. In return for their abstinence the shareholders receive a reasonable assurance for the maintenance of dividend payments. Also these accumulated reserves, in addition to serving their primary purpose of providing the policyholders' security earn an interest which can fairly be appropriated by the insurance companies. It is from such interest earnings, it must be repeated, that shareholders receive part of their dividends; the managements therefore endeavour to maintain a relationship between interest earnings and divided payments.

The importance of these interest earnings in insurance economy is well shown by the fact that 23 of the largest British insurance companies (or groups of companies) made a total earning on their underwriting business last year of £3,809,000—reduced by taxation at source to £2,662,000—whereas the dividends distributed amounted to £7,986,000.

Life insurance is the largest department of the British offices. There are fifty British offices possessing ordinary life funds exceeding £3 millions each. These offices transact over 97 per cent. of the total new life business done by the whole of the offices in Great Britain. From them can, of course, safely be drawn inferences for the life offices as a whole. The net new sums assured by these offices last year amounted to £158 millions. This compares with £155 millions in 1931 and £161 millions in 1930, and £157 millions in 1929. The net annual premiums on these sums amounted to £66 millions last year, as against £64 millions in 1931, £62 millions in 1930, and £59 millions in 1929. It will be seen, therefore, that last year's new business figures have been well maintained. Funds steadily increase: last year they were £743 millions, as against £708 millions in 1931 and £665 millions in 1929. The large increase in funds of £35 millions in one year is due chiefly to a large new annuity business.

Industrial Life assurance, on the other hand, shows for the first time for many years, a decrease in new business. Here the new sums assured fell from £153 millions in 1931 to £151 millions last year, though the premium income advanced from £43 millions in 1931 to £44 millions last year.

Fire insurance had rather an unfortunate year, but nevertheless the net premium income showed a slight increase over that of 1931. The loss ratio was abnormally high, due to bad trading conditions. *Marine* insurance last year was in a happier position than for some years past. Paradoxically, the better returns were also due to poor trade, for there were fewer ships at sea and the cost of ship repairs was extremely low. *Miscellaneous* (including accident) insurance earned very little for the companies in 1932. The companies' accident funds are increasing (£76 millions in 1932 as against £73 millions in 1931), but their net premium income last year was £56 millions, as against £59 millions in 1931. To close on a cheerful note, it is interesting to remark that insurance rates for personal accident to those travelling by Imperial Airways' liners are now no more in Great Britain than those charged for travel by rail or sea. The Imperial Airways Company claims that it is the only air transport company in the world in the enviable position.

AMALGAMATIONS.

Plastic Moulding.

Arrangements have been completed between Croydon Mouldrite, Ltd., and Imperial Chemical Industries, Ltd., whereby the resources, experience and services of both organisations in moulding powder and similar compositions are now available to the plastics and allied trades through Croydon Mouldrite. The control of Croydon Mouldrite, it is understood, has been acquired by Imperial Chemical Industries.

For some time past the plastic moulding industry has been progressing and developing very rapidly and, as many of the I.C.I. works are large potential suppliers of plastic material, the transaction is of considerable importance to the trades concerned.

Croydon Mouldrite, which is one of the largest producers of plastic mouldings, was registered as a private company in February, 1931. It has an authorised capital of £50,000 in £1 shares, all of which has been issued, and possesses works at Croydon and Welwyn Garden City.

NEW COMPANIES.

Rubber Producers Research Association.

This Association has been registered to develop the production and to extend the application of rubber and rubber latex and derivatives. It is limited by guarantee, without share capital, with an unlimited number of members, each liable for 10*s*. in the event of winding up. The management is vested in a council, the first members of which are:—

Sir Stanley Bois, chairman of several big plantation companies.

Mr. Percival J. Burgess, chairman of Malaysia Rubber Company.

Mr. William J. Gallagher, director of United Sua Betong Rubber Estates.

Mr. George H. Masefield, chairman of Ceylon Tea Plantations Company.

Sir Herbert Wright, director of Bandar Sumatra Rubber Company.

Mr Clifford H. Figg, director of Seremban Rubber Estates.

Mr. Henry J. Welch, chairman of Rubber Plantations Investment Trust.

Sound City (Films), Ltd.

This company has been formed for the purpose of carrying on the business of producers and manufacturers of cinematograph films, etc. Nominal capital, £175,000 in 5*s*. shares.

C. and F. Weldon, Ltd.

This company has been formed with the object of taking over the business of C. & J. Weldon, warehousemen, silk mercers and woollen merchants, button manufacturers, etc. Nominal capital, £70,100 in £1 shares (60,100 Preference).

Donovan Electrical, Ltd.

This private company has been floated with a capital of £50,000 in £1 shares. It has as its object the manufacture of, and trading in, electrical, marine, agricultural and automobile, etc., equipment. First directors are: George O. Donovan, Walter Donovan, Eric T. G. Donovan, Walter Donovan, junior, and William H. Varnom. Registered office—47, Great Charles Street, Birmingham.

Increases in Capital.

	£
Michael Nairn & Co., Ltd., Linoleum Manufacturers	228,080
Midland Woodworking Co., Ltd. . . .	55,000
The Lancashire Cotton Corporation, Ltd. . .	312,000
Tilling and British Automobile Traction, Ltd. .	200,000
National Canning Co., Ltd.	100,000
Croft Granite Brick and Concrete Co., Ltd. .	55,000

CONTRACTS SECURED.

Further Tonnage for Indian Coastal Service.

With the successful launch at Govan of the cargo and passenger Steamer " Prabhavati " Harland & Wolff, Ltd., have added a further vessel to the fleet of the Bombay Steam Navigation Company.

The new vessel, a sister ship of the "Chandravati", which Harland & Wolff, Ltd., launched last month and are now fitting out at Govan, is a light draft vessel having twin screws, designed for the service operated by the Bombay Steam Navigation Co., Ltd., between Bombay and Goa.

United Kingdom Engines for Iraq Pipeline.

The construction by the Iraq Petroleum Co. of an oil line from Kirkuk to Tripoli and Haifa is one of the most noteworthy tasks so far attempted in connection with the oil industry.

The order for the 45 Diesel engines of 500 B.H.P. each required for the various pumping stations was spread over three countries and Harland & Wolff, Ltd., secured an order for 15 engines, the largest number assigned to any one factory.

The shops trials of the first engines have been concluded recently at the Glasgow Works of the firm and the sets of engines for the first pumping station on the line between Haditha and Haifa are now in process of shipment. Harland & Wolff, Ltd., have thus the added distinction that they have been the first to complete the official trials required by the Iraq Petroleum Co., both for the duration tests of the engines themselves and the combined tests of an engine coupled to a pump.

Orders from Egypt.

A contract for the supply of tin ingots to the Egyptian State Railways has been awarded to P. & W. McLellan Limited, Glasgow. Value £6,000.

A contract for the supply of 1,000 reams of paper to the Ministry of Finance has been awarded to John Dickinson & Co., Ltd., London. Value £700.

Standard Telephones & Cables, Ltd., have secured an order for a rotary telephone exchange in Alexandria valued at £90,000.

Order from Spain.

Messrs. Thomas De La Rue & Co., Ltd., have been awarded the contract for the supply of 16,000 definite 6 per cent. bonds of Redeemable Debt, called National Culture Plan bonds, to the Ministry of Finance, Madrid.

Cargo Boat Orders.

The New Zealand Shipping Co. has placed an order for two large refrigerated cargo steamers with Workman Clark (1928) Ltd., Belfast. The new vessels will be about 15,000 tons and will be fitted with Diesel motor engines more powerful than those of the *Rangitata* class now operating on the company's New Zealand service. Several interesting innovations for refrigerated cargo vessels will be embodied in the new vessels.

The fact that the New Zealand Shipping Co. has placed this order with Workman Clark (1928) Ltd. is of interest at this juncture having regard to the order for two large vessels recently placed by their competitors in the New Zealand trade—Shaw Savill Albion Co. with Harland & Wolff Ltd.—so that Belfast has the distinction of building vessels for both these competitive companies.

Large Steel Order from Canada.

The steel work for the proposed new Ladner Bridge across the Fraser River is to be supplied by Dorman Long & Co., Ltd.

Polish Rail Contract.

A £2,000,000 Polish railway electrification contract has been signed between two United Kingdom firms, English Electric Co., Ltd., and Metropolitan-Vickers Electrical Export Co., Ltd., and the Polish Under-Secretary of State to the Minister of Finance.

In the contract provision is made for the supply and erection of a large quantity of railway material comprising locomotives, motor coaches, overhead line equipment and sub-station plant, and includes the necessary finance for certain civil engineering work associated with this electrification.

The negotiations covered a considerable period, and the successful culmination of these efforts is the result of the co-ordination and co-operation between the Prudential Assurance Company and the British Overseas Bank and the contractors, the English Electric Co., Ltd., and the Metropolitan-Vickers Electrical Export Co., Ltd.

This contract follows earlier contracts placed with the English Electric Co., Ltd., for generating plant and attendant switchgear for three power stations, for the installation of the Warsaw Suburban Tramways and for the electrification of the existing tramways in the Dombrowa Basin.

Coal Bartered for Iron Ore.

Guéret, Llewellyn and Merrett, Limited, the coal exporting organisation at Cardiff, have made a further transaction under which 25,000 tons of Newfoundland iron ore will be exchanged for Welsh locomotive coal of an equivalent value. British steamers will be employed. This firm are now completing a recent barter transaction by which Welsh locomotive coal will be exchanged for 48,000 tons of Newfoundland props.

The iron ore from Newfoundland will be taken by the British (Guest, Keen, Baldwins) Iron and Steel Company Limited, and will be imported at Cardiff and Port Talbot.

Dredgers for Burma and China.

William Simons and Co., of Renfrew, have received orders for two dredgers from overseas. One of the vessels, which will be a large Simons patent cutter suction dredger driven by Diesel engines developing 3,200 i.h.p. is believed to be the largest of her type ever built in the United Kingdom and is for service in Burma. The other, also of cutter suction type, is for service in China. She will be steam driven.

Steamship for Poland.

A Polish shipping company have placed a contract with Swan Hunter and Wigham Richardson, Ltd., for the construction of a steamship of 2,000 tons.

SHIPBUILDING.

WORLD'S GREATEST DRY DOCK.

The extension which was recently made to the dock accommodation at Southampton is one of the most notable engineering achievements in modern history. It has involved operations of great magnitude. The dredging work alone, for example, meant the removal of forty million tons of mud, gravel, sand, clay and other material from the bed of the port.

Southampton is in many respects a very conveniently situated port for the landing of passengers and cargo, and in 1924 the authorities decided to undertake the great work not only of providing for the port's immediate requirements but for those of its future. Powers to do this were granted to the Southern Railway Company, and by the end of July this year the work had so far progressed that the formal opening of the new dock by the King was possible. This new dock, one of the principal features of the new port works, is a huge concrete structure 1,200 feet long, 135 feet wide, and 59 feet deep. It can hold 260,000 tons of water and accommodate a vessel of 100,000 tons, if one should ever be built. It is, in fact, by far the largest dry dock in the world, and the building of it is not only an engineering feat of outstanding magnitude, but one of extreme ingenuity.

IRON AND STEEL.

There were 69 furnaces in blast at the end of July, four furnaces having been damped down due to the Scottish holidays, one furnace having gone out of operation, and two furnaces commenced during the month. The production of pig iron in July amounted to 343,900 tons compared with 345,600 tons in June and 292,600 tons in July 1932. The production includes 89,800 tons of hematite, 159,400 tons of basic, 72,900 tons of foundry and 13,200 tons of forge pig iron.

The output of steel ingots and castings in July amounted to 567,500 tons compared with 568,800 tons in June and 438,400 tons in July, 1932.

The following table shows the average monthly production of pig iron and steel ingots and castings in 1913, 1920, 1930-1932, and the production in each month since July, 1932.

	Pig Iron. *Tons.*	*Steel Ingots and Castings.* *Tons.*
1913—Monthly average . .	855,000	638,600
1920 „ „ . .	669,500	755,600
1930 „ „ . .	516,000	610,500
1931 „ „ . .	314,400	433,500
1932 „ „ . .	297,800	438,100
1932—July	292,600	438,400
August	259,400	361,500
September . . .	260,400	430,300

		Pig Iron. *Tons.*	*Steel Ingots and Castings.* *Tons.*
1932	October	275,600	439,800
	November	267,700	473,800
	December	284,500	430,400
1933	January	286,600	444,400
	February	270,800	482,700
	March	332,200	577,700
	April	324,700	509,600
	May	339,900	599,600
	June	345,600	568,800
	July	343,900	567,500

AUTOMOBILE AND ALLIED TRADES.

AN EPIC ACHIEVEMENT.

The United Kingdom Motor Industry has proved a bright spot in the general World Economic difficulties of the past two years for it virtually maintained its position almost alone among the important exporting Industries of the World. It is therefore not altogether surprising to learn that this Industry is in the forefront of the general Trade recovery, and can show some really remarkable progress.

For the first time in the history of the Industry registrations of new cars in Great Britain for the first 6 months, have exceeded 100,000, thus beating the previous record—that of 1929—by over 400 units.

Turning to the Export side, the value of exports of all types of motor vehicles and parts during July exceeded the figure for the corresponding period of last year by £214,458, and have increased during the seven months of this year, as compared with the same period of a year before, by over £1,700,000.

Imports decreased by over £70,000 in July as compared with a year ago, and by over £450,000 over the seven months as compared with the same period in 1932.

The United Kingdom Motor Industry is alert to the possibilities still awaiting exploration in the various markets of the World, and particular attention is being paid to the Continent. A delegation representing the Society of Motor Manufacturers and Traders Ltd. visited Finland during the " British Week " early in September to study the requirements of that market. Thus, by delegation and by individual visits, the Industry is endeavouring successfully to increase the scope of its activities, and, encouraged to yet greater efforts, it looks confidently forward to a period of increasing advancement.

TEXTILES.

COTTON.

An unsettled feeling has been noticeable in Manchester since the August Holiday and confidence has been impaired further by the decline in raw cotton values as a result of the official statistics of the American crop. Yarn quotations have been irregular and only restricted business has been done in America and Egyptian yarns and export demand has also been quiet. These conditions have also reacted on the cloth market; small orders for poplins, sateens and other fancy cloths have, however, been received for India, and the Straits Settlements and Java have done small business in cambrics and fancies. A few transactions have been put through for China, chiefly in poplins. Trade with Egypt, West Africa and some of the South American Republics has been spasmodic. A few heavier goods have been bought by South Africa and Australia.

The exports of yarns and piece-goods for the month of July compared with June this year and July, 1932, are as follows:—

	July, 1933.	*June, 1933.*	*July, 1932.*
Cotton Yarns.	*Nearest 1,000 lbs.*	*Nearest 1,000 lbs.*	*Nearest 1,000 lbs.*
Grey	9,351	9,495	8,137
Bleached and dyed .	1,061	1,087	1,391
Piece-goods.	*1,000 sq. yds.*	*1,000 sq. yds.*	*1,000 sq. yds.*
Grey	25,114	22,791	30,663
Bleached . . .	45,348	45,341	69,376
Printed . . .	34,025	30,155	39,719
Dyed	43,204	37,049	49,230
Coloured . . .	6,987	6,220	9,291
Total Piece Goods .	154,678	141,556	198,279

Comparing the trade for the seven months ended 31st July for the last three years the total yarns exported amounted to 73,763,000 lbs. (1931); 89,976,300 lbs. (1932); 76,554,700 lbs. (1933), and the export of piece-goods of all kinds to 1,025,232,400 sq. yards (1931); 1,346,228,100 sq. yards (1932), and 1,237,785,900 sq. yards in 1933.

WOOL.

The export figures for wool textiles— both semi-manufactured and piece-goods—make more encouraging reading than those of the cotton trade. With the exception of mohair and alpaca fabrics and furnishing fabrics (both small sections) an increase is shown in July under all headings over the corresponding months of the last two years and in the seven months ended 31st July this year over the corresponding periods of 1932 and 1931.

Showing how wool has gone into consumption it is noteworthy that only 45,234 bales were held over after the fourth London wool auctions as compared with 104,640 bales from the fourth series of auctions last year. Moreover, of the total held over last month, Australian grease wool amounted to only 9,150 bales, against 26,765 bales from the fourth series last year. The figures for New Zealand grease wool are 22,413 bales compared with 48,696 bales. Another interesting side-light on the raw material position is afforded by the latest returns of exports from South America. Thus, during the ten months ended July last, exports from Argentina show an increase of 89,500 bales compared with the total for the corresponding period of last season, and there is an increase of 31,000 bales in shipments from Uruguay. South African stocks of unsold wool on 30th June, 1933, amounted to 5,000 bales compared with 54,000 bales at the same date in 1932. Stocks of wool tops in several manufacturing countries also show decreases on earlier figures. Consumption of yarn is well maintained and several Yorkshire spinners are better employed than for many years.

Manufacturers are experiencing difficulty in making increased prices based on the advance in the cost of yarns, but there are indications that wholesale fabric buyers are realising that these advances will have to be paid.

LINEN.

A large proportion of the Northern Irish flax has now (16th August) been pulled under favourable weather conditions. The area under flax in Northern Ireland this year was 9,784 acres as against 6,093 acres last year, and it is believed that the yield will be good.

Business in all sections of the industry was slack in July, which is of course the holiday month in Northern Ireland. Rather more orders, however, were received by spinners than is usual at this time of the year. Shipments of flax and hemp yarn were well above the usual level, exports in July being valued at £55,778 compared with £29,616 in July, 1932, and £42,130 in July, 1931.

The level of business in piece-goods continued to show improvement when compared with the level reached in recent years. The increase in the value of the Danish market is worthy of remark. In July the value of exports of linen piece-goods from United Kingdom to Denmark was £5,445 compared with £2,639 in July, 1932, and £2,778 in July, 1931.

The United States of America continued in July to take more linen piece-goods than during the same period last year; on the other hand it took slightly less than in July, 1931.

Australia and Canada are also buying well. Among Empire countries the least satisfactory is perhaps New Zealand, which is continuing to fall away gradually as a market for linen piece-goods.

Exports of Damask Table Linen continued low in July; in the seven months ended 31st July the value of exports of Damask Table Linen amounted only to £293,537 as compared with £400,345 in July, 1932, and £373,164 in July, 1931.

The value of linen goods imported into the United Kingdom in July was £18,826, as compared with £37,858 in July, 1932, and £59,081 in July, 1931.

The value of linen goods exported from the United Kingdom in July was £422,165, as compared with £363,225 in July, 1932, and £434,120 in July, 1931.

The value of linen goods exported from the United Kingdom during the seven months ended 31st July, 1931, 1932 and 1933, were respectively, £3,076,435, £3,127,655 and £3,103,320. The quantities of linen piece-goods exported during the same periods were 37,538,700, 41,706,300 and 44,777,300 square yards.

MACHINE TOOLS.

BENDING AND MULTIPLE PUNCHING PRESS.

Messrs. Taylor & Challen, Limited, Derwent Works, Birmingham, have introduced a new type of precision press for bending and multiple punching operations on large sheets used in the construction of box-shaped articles, shelving and channelling, where accuracy and interchangeability are essential. It is designed to bend sheets up to 10 feet in length between the side frames, or 12 feet for narrower work, by $\frac{3}{16}$-inch in thickness, with a $\frac{3}{16}$-inch inside radius at the bend. The built-up steel frame gives maximum rigidity with minimum weight, while the ample depth of both slide and bed practically eliminates deflection in these members at full load. The design is such as to reduce the head-room requirements to a minimum.

The open-throat construction allows sheets of any length to be formed or pierced along their edges, and the operators can work at either back or front or both, the space between the side frames being unobstructed. Successive operations on narrower parts can be performed by passing them through the sequence of tools from the right to the left-hand side of the machine. A powerful friction clutch and brake is provided, the latter being timed to operate immediately the clutch is disengaged; as a result, it is possible to " inch " the slide up or down by separate movements of as little as $\frac{1}{16}$-inch. This complete control over the movement of the slide is of great assistance when setting the tools or positioning the work on the dies or to the gauges. The clutch is controlled by foot, treadle or hand lever adjustable to any position on a splined shaft running the full width of the press.

The main drive is by motor mounted on an adjustable bracket to the rear. A second motor permits of adjusting the slide through worm gearing. Back and front adjustable work gauges are provided, and all bearings are lubricated by a force-feed system. The maximum pressure exerted at the bottom of the stroke is 100 tons.

Craven Brothers (Manchester), Ltd., Vauxhall Works, Reddish, Stockport, have recently received orders for one double-head crankpin re-turning and grinding machine for the Belgian State Railways and one vertical boring and turning mill with 5 ft. 6 in. table for a home railway company. Other machines in hand for railway work include an electrically-driven railway wheel balancing machine and an axle journal re-turning and burnishing lathe; a double-ended tyre boring and wheel centre turning, boring and bossing lathe for home railways and a 6 feet heavy type wheel lathe, an electrically-driven vertical milling machine, an external precision grinding machine, and a 48 inch car wheel boring machine for the Pacific Railway, Colombia. Machines for general engineering work in progress include three roll-turning lathes, a diamond boring machine, a deep hole drilling machine, and crankpin and crank journal turning machines for the motor industry.

Binns & Berry Bros., Ovenden, Halifax, are experiencing a good demand for long-bed lathes for export. At the moment, two 13 in. centre machines on 16 ft. beds, two 18 in. centre machines on 20 ft. beds, and one 20 in. centre machine on a 20 ft. long bed are in progress.

Ward, Haggas & Smith, Parson Street, Keighley, have a number of vertical and horizontal universal milling machines and an 11 in. centre relieving lathe in hand for a home dockyard. Other work in progress includes 24 in. stroke open-side planing machines, a railway carriage and wagon wheel lathe for overseas, a large universal plano-milling machine, and various special-purpose machines.

AVIATION.

PROGRESS OF ENGLAND-AUSTRALIA AIRWAY PLANS.

A Successful Survey Flight.

New Monoplane Airliners.

Organization of the world's longest airway—from England to Australia—goes steadily forward. Until recently the Imperial Airways Service ended at Calcutta, now seven days by aeroplane from London. At the end of September the route was extended to Rangoon, scheduled to be reached in less than nine days from London. Before the end of the year the ultimate terminus will be Singapore; the likelihood is that the first air mail received there will consist largely of Christmas letters and parcels from home.

Over the remaining 2,500 miles of the way, from Singapore to Port Darwin, the chosen point of landfall in Australia, the service will be entrusted to a company selected by the Commonwealth Government. If all goes according to plan, the first through mails on the regular England-Australia service will leave London some time in March. From Darwin they will be carried on to Melbourne, Sydney, and Brisbane in the east and to Perth and Adelaide in the west and south by the Australian air transport lines.

The organization of auxiliary services will constitute an important phase in further development of the airway. Plans are already under consideration for the establishment of a service linking the Australia airway at Singapore with Siam, Hong Kong, Shanghai and Tokio. Within the next two years the whole of the Far East, much of the southern seas, Australia and Tasmania, and even, perhaps, New Zealand, should be joined in a network of regular air routes.

There is good augury for the success of the England-Australia line in the satisfactory completion of a survey flight from London to Sydney and back to Karachi, undertaken by Major H. G. Brackley, Flying Superintendent of Imperial Airways, which ended last month. He flew out to Australia and back to India in " Astraea ", one of the fleet of eight four-engine Armstrong Whitworth monoplanes which were designed especially for operation over the British transport routes in Africa and Asia. Altogether the aeroplane covered 23,540 miles from the time of departure from London to the moment when it was handed over at Karachi for use on the trans-Indian service between Karachi and Calcutta. Neither the machine nor its " Serval " 340 h.p. motors needed any attention along the way other than the normal care and maintenance which is given to every aeroplane and aero engine used on an air route.

Major Brackley, accompanied by Mr. Hudson Fysh, managing director of the important Australian concern, Queensland and Northern Territories Aerial Services, Limited, left Sydney on 7th July, stopped four days on the way for business discussions, transferred at Karachi to the ordinary airmail service and yet reached London on 24th July. Seventeen days for the journey from Sydney to London, including four days without travel, indicates sufficiently the important speeding up of communications between England and the Commonwealth which the airway will ensure. Actually, their journey is believed to be the quickest ever made from Sydney to London.

The " Astraea " ascended from the aerodrome at Port Darwin, westward bound, on 10th July. It landed at Calcutta - 4,650 miles away - on 15th July, after a stop of two full days at Rangoon. In six flying days the aeroplane travelled about 7,000 miles from Sydney. Another two days were spent in Calcutta, and on 18th July the travellers reached Karachi.

High cruising speed, ease and low cost of upkeep, long engine life and security mark the design of these new monoplane airliners. Loaded to a total weight of 20,000 pounds, they cruise easily at 125-130 m.p.h. and reach a maximum speed in level flight of 156 miles an hour. With any one engine stopped and full load on board, they can maintain level flight on the remaining three motors at all heights up to 7,000 feet. Those in the service of Imperial Airways in Africa and India are fitted to carry nine passengers, but comfortable accommodation may be provided for up to 17 passengers, should the conditions of operation vary from those at present dictating the requirements of Imperial Airways.

The designers have prepared plans for a slightly larger and more powerful version of the aeroplane, with four moderately supercharged Armstrong Siddeley " Jaguar " 400 h.p. motors displacing the 340 h.p. " Serval " units. The maximum speed goes up to rather more than 160 m.p.h., attained at a height of 4,000 feet, and the cruising speed to 135. Rate of climb in the initial stages is improved from 700 to 1,000 feet a minute. The gross weight is increased to 23,000 pounds, allowing the carriage of 20 passengers and their luggage, a crew of three, fuel and oil for thee hours' flying at cruising speed, and full radio and navigational gear for flying by night and day. The absolute " ceiling " is 19,000 feet.

Performance on any three engines is better than that on full power of many aeroplanes still in service. The maximum speed attainable in this condition is 120 miles an hour, and economical cruising speed 108 m.p.h., implying that the machine will be able to maintain level flight with any one motor stopped on considerably less than the full power of the remaining engines. And level flight can be maintained on any three engines at heights ranging up to 10,500 feet. Further, the machine will take off on the power of three motors, and climb at a speed of 500 feet a minute.

Plainly, the "Jaguar"-powered monoplane is admirably suited for operation of many air routes in Europe and elsewhere, especially where mountain ranges oblige air transport craft to fly high. Its speed is notable in a craft of such size; its comfort is amply demonstrated in the "Serval" engined 'planes, and the four-motored power plant offers a wide and comforting margin of safety in all emergencies.

CATALOGUE LIBRARY.

The undermentioned catalogues relating to United Kingdom manufacturers have recently been received and may be consulted by *bona fide* firms or individuals at the Office of His Majesty's Senior Trade Commissioner in India, Fairlie House, Fairlie Place, Calcutta.

*Baird & Tatlock (London), Ltd., 11/17, Cross Street, Hatton Garden, London, E.C. 1.	Scientific Apparatus.
Robert Boby Ltd., St. Andrews Works, Bury, St. Edmunds.	Grain Handling Cleaning and Grading Machinery, Elevators and Conveyors.
G. A. Harvey & Co. (London), Ltd., Woolwich Road, London, S.E. 7.	Steel Office Furniture and Steel Equipment for Factories and Stores.
The United Kingdom Optical Co., Ltd., Mill Hill, London, N.W. 7.	Optical Lenses.
Wm. Wilkinson & Sons (Penketh), Ltd., Lymm, Warrington.	Telegraph and Linesmens Tools, etc.: Pliers and Nippers.

[1] The catalogue marked with an asterisk has also been received in the Office of His Majesty's Trade Commis-

sioner, 3, Wittet Road, Ballard Estate, Bombay, where it may also be consulted by *bonâ fide* firms or individuals

In addition, His Majesty's Trade Commissioner, Bombay, has recently received the undermentioned catalogue.

Name and Address.	*Description.*
Carr & Co., Ltd., Carlisle.	Biscuits, Chocolates and Toffees.

TRADE ENQUIRIES.

The name of the United Kingdom firm referred to in the enquiry mentioned below will be furnished to reputable firms on application to His Majesty's Senior Trade Commissioner, Post Box No. 683, Fairlie House, Fairlie Place, Calcutta.

No. 872-33.

A United Kingdom manufacturer of cigarette making machines, tobacco cutting machines, carton making and cigarette packing machinery, etc., is desirous of appointing agents in touch with tobacco and cigarette manufacturers.

MGIPC—L—289HMTC—11-10-33—1,050.

H. M. TRADE COMMISSIONERS IN INDIA.

Calcutta—

Sir Thomas M. Ainscough, C.B.E.,
His Majesty's Senior Trade Commissioner in India and Ceylon.

Mr. R. B. Willmot,
His Majesty's Trade Commissioner at Calcutta.
Post Box No. 683, Fairlie House, Fairlie Place.
Telegraphic Address.—" Tradcom, Calcutta.
Telephone No.—" Calcutta 1042."

Bombay—

Mr. W. D. M. Clarke,
His Majesty's Trade Commissioner at Bombay.
Post Box No. 815, 3, Wittet Road, Ballard Estate.
Telegraphic Address.—" Tradcom, Bombay."
Telephone No.—" Bombay 23025."

Ceylon—

Imperial Trade Correspondent,
The Principal Collector of Customs, Colombo.

With Compliments.

OCTOBER 1933

The
Commercial Bulletin

A Monthly Review of Official and other announcements relating particularly to British Export Trade

Issued by

HIS MAJESTY'S SENIOR TRADE COMMISSIONER
IN INDIA AND CEYLON.

FAIRLIE HOUSE,
FAIRLIE PLACE,
CALCUTTA.

CONTENTS.

PAGE.

GENERAL 1

FINANCE 5

CONTRACTS SECURED 7

IRON AND STEEL 9

MACHINE TOOLS 11

SHIPBUILDING 12

WIRELESS 14

TEXTILES 22

POTTERY AND GLASSWARE 26

PAPER 27

AVIATION 29

THE UNITED KINGDOM PAPER INDUSTRY 32

CATALOGUE LIBRARY 35

TRADE ENQUIRIES 36

GENERAL.

The August Trade Returns suggest that the recent expansion in industrial activity in the United Kingdom has been accompanied by a slight improvement in her foreign commerce. The value of retained imports, at £52·5 millions showed an advance of £3·1 millions on July and one of £2·7 millions on the corresponding month last year. Similarly exports were valued at £31·0 millions in August as compared with £29·8 millions in July and £28·6 in August, 1932. The value of retained imports of raw materials in August was £14·3 millions, as against £12·6 millions in July and £10·3 millions in the corresponding month a year ago. This increase is, of course, partially due to the rise in the price of some of the leading primary products. Imports of manufactures rose from £10·9 millions in July to £12·1 millions in August, but are approximately equal to those in August, 1932. The advance in the value of the United Kingdom sales abroad is due almost entirely to an increase in the United Kingdom exports of manufactured articles. The figures of the volume of leading exports show that the expansion in exports has by no means been general. All classes of woollen goods, linen piece goods, leather and locomotives show an appreciable improvement on last year, and the increase in the United Kingdom's foreign sales of motor cars is particularly encouraging. On the other hand the figures for cotton manufactures, textile machinery, coal, and iron and steel are disappointing. For the single month of August there was an increase in the United Kingdom's foreign sales, as compared with a year ago, of iron and steel, nonferrous metals, cutlery, electrical goods, machinery, woollen manufactures, apparel, leather and vehicles. As compared with the previous month the improvement has been most pronounced in the case of coal, pottery, electrical goods, woollen manufactures, apparel and chemicals.

In the month to 21st August there was a fall of over 30,000 in the number of unemployed, while for the 12 months the decline is nearly half a million. It is estimated that at that date there were approximately 9,857,000 insured persons in employment in the United Kingdom—57,000 more than the month before and

648,000 more than the year before. The improvement continued in iron and steel manufacture, general engineering, shipbuilding and ship repairing, electrical apparatus manufacture, the woollen and hosiery industries and in the shipping and hotel services. There was also some improvement in coal mining and in the building industry, while the termination of local holidays at certain centres of the cotton and jute industries led to a reduction for those industries in the numbers registered as unemployed. On the 21st August the numbers of unemployed persons on the registers of employment exchanges in the United Kingdom were 1,843,517 wholly unemployed, 483,432 temporarily stopped and 84,188 normally in casual employment, making a total of 2,411,137. It is the smallest total since the end of 1930 and is 31,038 less than the number on the registers on the 24th July, 1933, and 448,691 less than a year before. The total on the 21st August, 1933, comprised 1,984,930 men, 62,365 boys, 320,667 women and 43,175 girls.

A GREAT ENGINEERING ACHIEVEMENT.

A special commission decided some years ago that to make electricity available in every village and hamlet of England would be an important advance in the national economy. Power and light should be supplied in accordance with a definite national plan. This idea presented so many obvious advantages that a great scheme was evolved and, in 1928, the first moves were made to put it into practice.

The preliminary stage consisted in the erection of great pylons to carry cables through every district, and at the same time vast central generating stations were to be built in the most suitable places. History was made in the first week of September this year with the erection in a Hampshire field of the last one of the 26,266 pylons. Thus, the main lines for the electrification of Great Britain were completed, by far the most difficult and costly part of the whole scheme. The constructional work alone has cost nearly £40 million. The pylons carry a network of cables over 20,000 miles long and covering an area of 4,000 square miles. Over 150,000 tons of high grade steel have been used in these pylons. Already several important areas—Scotland and mid-Eastern England—are enjoying electricity to the full, and in less than a year the great central generating stations for the whole country will be working. Thus, the problem of the electrification of Great Britain is virtually solved. It is one more triumph of British engineering and enterprise.

PETROL FROM COAL.

A scheme for the encouragement of the home production of motor spirit was recently evolved by the British Government. In brief it consists of a subsidy to the manufacturer. Anyone who manufactures motor spirit from home-produced coal, shale, peat, or their derivatives, is to be guaranteed a preference of at least four pence a gallon on the product. The length of time the preference will last will depend upon the continuance, or otherwise, of present taxes on imports. Should the taxes be dropped or reduced, then the preference on the home manufactured article may last for nine years from the date when the necessary plant is in operation, which will probably be in 1935; but should the taxes continue unaltered then the guarantee would last only four and a half years.

The effects of the scheme will be many and varied. In the first place it may be considered in relation to the coal industry. It is common knowledge that the U. K. coal industry has suffered severely of late years. In 1913 it produced 287·4 million tons of coal and exported 73·4 million; in 1932 there were only 208·7 million tons produced and 38·9 million tons exported. In June this year though of course we must note that there is always a seasonal decline of employment in June about 36 per cent. of the insured population in the coal industry were unemployed. The production of oil from coal will create a demand for more coal and consequently lead to the absorption of some of the miners who are at present unemployed.

Then comes the question of the process involved and the by-products of the industry. The method the Government seek to assist is that whereby the carbo-hydrogen ratio is altered, known as the hydrogenation method. A good deal of research work has been done in this method. According to an article in "The Times", the Fuel Research Station found by experiment that one ton of coal produced twenty gallons of tar, which on hydro-

---

* *Vide* p. 2, "Commercial Bulletin" for August, 1933.

genation gave fourteen gallons of motor spirit and six gallons of Diesel oil. But this method raises a new question, for by it the main product of the coal is not tar, but coke.

The coke produced is used for domestic fuel. It gives out abundant heat and it is smokeless; but such coke is somewhat dearer than coal by weight. If oil and motor spirit is to be produced in great quantity the market for smokeless fuel will have to be expanded. From the point of view of health alone a wider use of smokeless fuel, with a resultant clearer atmosphere, is very desirable, and if the users of domestic coal changed over to smokeless fuel it is estimated that the demand for coal would be increased about four million tons.

There are already in existence a number of firms working on the hydrogenation or low-temperature carbonisation process. One of them, "The Low Temperature Carbonisation Company", recently extended their plant. Their smokeless fuel, "Coalite", is widely used, and they recently secured a year's contract for a supply of oil for the Royal Navy and a year's contract for a supply of aviation spirit to the Royal Air Force. "Imperial Chemical Industries, Limited" have conducted research on the hydrogenation of coal, tar, and other materials for the past six years, and have spent one million pounds on their experiments. They now propose to erect a large commercial plant at Billingham-on-Tees, where special facilities are available.

The "Imperial Chemical Industries" plan is to build a plant that will produce from the start 30 million gallons of motor spirit a year. The work of construction, which will be spread over a period of eighteen months, will give employment to seven thousand men directly and five thousand men indirectly. It is estimated that the whole scheme would cost about four million pounds; but as there is a large amount of plant already available, the new capital required will be in the neighbourhood of two and a half million pounds. When the scheme is in operation 370,000 tons of coal will be required to produce the 30 million gallons of motor spirit, giving permanent employment to 1,500 miners, or a fair-sized mine. In addition there will be the staff required to work the plant. And this is for the "Imperial Chemical Industries" scheme alone, to produce 30 million gallons of motor spirit a year. But the total U.K. import of motor spirit last year was 1,000 million gallons, so the scope for future developments in this field is obviously enormous.

FINANCE.

NEW COMPANIES.

Basic Bricks (Overseas), Limited.

This private company has been formed with a capital of £50,000 in £1 shares. Manufacturers and distributors of refractory bricks and refractory materials of every description. Registered office—Thames House, Millbank, London, S.W. 1.

Gyproc Products, Limited.

This private company has been formed with a capital of £100,000 in £1 shares, to acquire the business carried on by Gypsum Lime and Alabastine Canada in the United Kingdom and the trade mark Gyproc. Manufacturers of and dealers in artificial stone, etc.

Weston Biscuit, Limited.

This company has been formed with a nominal capital of £90,000 in £1 shares, to adopt an agreement between Mitchell and Muil, of Aberdeen, and Robert A. Robertson, treasurer of George Weston, of Toronto, Canada, and now of Aberdeen, and to carry on business as manufacturers of and dealers in bread, biscuits, caterers, etc. Directors: R. A. Robertson, John Clark, William G. Weston, Sydney Hodkinson. Registered office—12, Hope Street, Edinburgh.

Kaye Don, Limited.

This private company has been formed with a capital of £1,000 in £1 shares, to carry on the business of manufacturers of motor cars, lorries, coaches, cycles and boats, etc. The first directors are:—Kaye E. Don, Joseph C. Wilson.

Cullen's Stores, Limited.

This private company has been formed with a capital £350,000 in £1 shares, to acquire the business of merchant storekeepers formerly carried on by Wm. Hy.

Cullen and John Bury Cullen as W. H. Cullen at 32-38, Earl Street, Finsbury, London, E.C.

Henry Whitehead, Limited.

This private company has been formed with a capital of £60,000 in £1 shares, to acquire business of yarn spinners carried on at Young Street Mills, Bradford, as Henry Whitehead, and to carry on the business of worsted and woollen yarn spinners, combers, doublers, scribblers, carders, dyers, weavers, mill owners, etc. The first directors are to be appointed by the subscribers.

Priestman Whitehaven Collieries, Limited.

This private company has been floated with a capital of £150,000 in £1 shares, to acquire from Lowther Estates and work the Whitehaven Collieries, Cumberland. So long as 10,000 shares are held by Lowther Estates, it may nominate two directors while the number is less than seven or three directors if the number exceeds six.

Severn Ports Warehousing Company, Limited.

This private company has been formed with a capital of £50,000 in £1 shares, to adopt an agreement with Henry Hosegood and Son and to carry on the business of warehousemen, wharfingers, stevedores, dock owners, etc. The directors are: Hy. Hosegood—Laurence Hosegood Harold M. C. Hosegood Gerald A. Godwin and Wm. H. Cullis. Registered office 27, Commercial Road, Gloucester.

E. Green and Son, Limited.

This private company has been formed with a capital of £523,600 in £1 shares, to acquire the undertaking and certain of the assets of E. Green and Son (incorporated 1888 and now in voluntary liquidation), manufacturers of fuel economisers, feed water heaters, air heaters, etc. Directors:—Francis Wm. Green David C. Lycett Green —Francis D. Lycett Green—Edward B. Green Richard R. L. James and Harold Livsey. Registered office is at Calder Vale Road, Wakefield.

Increases in Capital.

	£
Strathclyde Electricity Supply Co., Ltd. . .	400,000
Cement Industries, Ltd.	150,000
Shaw Savill and Albion Co., Ltd. (Shippers) .	100,000
Jones Textilaties, Ltd. (Reeds and Healds) .	40,000

CONTRACTS SECURED.

Orders from Egypt.

	£
Earl of Dudley's Round Oak Works, Ltd., Brierley Hill, Saddles for rails	1,566
Ilford, Ltd., X-ray films	1,000
Thos. Cook & Son, Ltd., Jewell filters . .	3,780
Southall Bros. & Barclay, Ltd., Birmingham.	
John Johnson & Sons, Manchester.	
Charles F. Thackray, Leeds, Cotton dressing and mackintosh	8,100

Order from Finland.

Babcock and Wilcox, Limited, have obtained the order for a large boiler for the Kymmene Aktiebolag Paper Mills of Kuusan Koski.

Order from Argentina.

Hadfields, Limited, and Edgar Allen and Company, Limited, have secured the contract for the supply of spare parts for dredgers valued at £4,316 for the Department of Navigation and Ports, Buenos Aires.

Contract from Holland.

C. A. Parsons and Company, Limited, Heaton, Works, Newcastle-upon-Tyne, have received from N. V. Koninklijke Maatschappy " De Schelde " an order for a turbo-type alternator and exciter of 28,570 KVA for the Mauvits power station of the Dutch State Mines. The machine is to run at 3,000 r.p.m. and will generate three phase current at 10,500 volts.

Finnish Contract for the U.K.

Ferranti, Limited, have secured an order for the first large British-made transformer to be installed in Finland. It is a three-phase unit of 12,000 KVA capacity (approximately 16,000 h.p.) for operation at 47,000 volts, with on load tap changing gear, and it will be used for the transmission of power from the Imatra Hydro-electric scheme to the Warkaus paper pulp factories. All large transformers hitherto installed in Finland have been of German or Swedish manufacture.

U.K. Typewriter Contracts.

Exclusive contracts for the supply of British-made typewriters to the Australian and New Zealand Governments have been awarded to the Imperial Typewriter Co., Ltd., of Leicester. These contracts, both of which are for hundreds of machines, extend for two years. The production of each one of these typewriters gives employment to three British workmen for a week.

£700,000 Contract for U.K. Works.

It was recently confirmed in Swansea that the Grovesend Steel Company is sharing in a £700,000 contract made by the Government of the Argentine Republic with a U.K. group of iron and galvanised steel works, for galvanised iron fencing as a protection against locusts.

Twelve other firms participate in the order, but acceptance of the tenders is subject to the approval of the Argentine Senate.

Brazilian Contract for the U.K.

An important contract from the Brazilian Government is being executed by J. I. Thornycroft & Co., at Southampton. In the teeth of keen foreign competition this British firm recently secured the order for a new boiler outfit for the Brazilian battleship Minas Geraes.

Together with her sister ship Sao Paulo, this vessel was built in England in 1907. She was originally fitted with coal-burning boilers, but these are now being replaced by the latest type of Thornycroft water-tube, oil-fired generators, and it is expected that the ship's speed will be increased as a result. Moreover, her fuel bill will be lower.

The new boilers will be shipped to Brazil to be installed in the battleship under the supervision of Thornycroft's engineers.

With the exception of the Portuguese sloops and destroyers now building on the Tyne and the Clyde, this is the largest foreign naval contract which has come to Great Britain for several years. Its value is estimated at £50,000.

SHIPPING CONTRACTS.

William Simons and Company, Limited, Renfrew, have received from Burma an order for the construction

of a cutter suction dredger driven by Diesel engines developing 3,200 i.h.p. They have also secured a contract for the building of a steam-driven dredger, also of the cutter suction type, for service in China.

A contract from Poland for the construction of a steamer of 2,000 tons has been placed with Swan, Hunter and Wigham Richardson Limited, Wallsend-on-Tyne. The vessel is for service between Gdynia and British ports, and will be fitted for the transport of perishable goods.

Alexander Stephen and Sons, Limited, Linthouse, have secured an order from the Union Steamship Company of New Zealand, Limited, for a cargo steamer 270 ft. in length.

The New Zealand Shipping Company have placed an order for two large twin-screw refrigerated cargo motorships with Messrs. Workman, Clark (1928), Limited, Belfast. The vessels will be about 15,000 tons, and will be fitted with engines more powerful than those of the Rangitata class now operating on the company's New Zealand service. They will, it is understood, be 500 ft. in length, with a beam of 68 ft. and have a service speed of 15½ knots.

An order has been received by Brooke Marine Motors, Limited, Lowestoft, from the Lobitos Oilfields, Limited, for the construction of a motor tug for shipment to Peru. The vessel is to be 45 ft. long, with a beam of 11 ft. and will be used chiefly for the purpose of mooring up the large oil tanks at the end of a pipe-line. The machinery will be a full Diesel motor developing 80 h.p. at 800 r.p.m.

Palmers Shipbuilding and Iron Company, Limited, Hebburn-on-Tyne, have secured the order for extensive survey repairs to the Anglo-American Oil Company's tanker Kennebec.

IRON AND STEEL.

Output. The output of pig iron continues to show steady expansion, the production in August being 362,700 tons against 343,900 tons in July and 259,400 tons in August, 1932. The output last month was the highest for many months. There were 73 furnaces in full blast at the end of the month, the 4 furnaces which had been damped down in Scotland during the holidays having resumed operations, and two others which were put in blast being offset by two furnaces having ceased operations during the month. The continued improvement in the pig iron output is due to the recovery in the iron and steel industry generally and particularly to the healthy state of the light castings industry in the West of Scotland, where prospects are considered to be better than they have been for some years. In view of the poor state in which the shipbuilding industry still remains, the steady improvement in the steel industry is remarkable and wholly satisfactory.

The output of steel ingots and castings in August was affected by holidays, and amounted to 551,300 tons as compared with 567,500 tons in July and 361,500 tons in August of last year.

Imports.- The imports of iron and steel material in August were higher than in July, the figures being 79,710 tons and 63,434 tons respectively. The principal item contributing to this figure is pig iron from India, but small increases in rolled sections from the Continent are to be noted.

Exports.--As indicated above, most of the improved tone in the industries generally is on account of Home business, but inquiries from abroad are increasing and a gradual expansion of export business is looked for. The total tonnage of exported iron and steel material of all kinds is given in the official trade returns for August as 154,682 tons, a figure slightly lower than that for both the immediately preceding month and August, 1932. Variations in the main items are very small, but it is to be noted that the galvanised sheet trade for India and South Africa has greatly improved. Nearly 5,000 tons of sheets were shipped to India during the month.

The position in the tinplate industry, which contributes so materially towards the total of manufactured steel material exported, is that while the mills are still well employed on good orders in hand, the amount of new business in prospect has fallen off. The export figures for August are about 5,000 tons down on those for July. In the lighter hardware trades hollow-ware exports amounted to 12,091 tons compared with 957 tons in July and 652 tons in August, 1932—figures which show a very notable expansion. Light castings, which include stoves and grates and other sanitary cast iron goods, produced to a large extent in the West of Scotland, have also, as indicated above, shown a satisfactory improvement in the export figure.

MACHINE TOOLS.

W. H. A. Robertson and Company, Limited, Bedford, have recently introduced a machine for drawing ferrous and non-ferrous metals to any dimensions between 30 s.w.g. and 50 s.w.g. on spools from 1¼ to 4 in. core dia. and from 1½ in. to 1½ in. traverse at drawing speeds up to 5,000 ft. per min. A variable speed ratio of 50 per cent. affords spooling speeds of 2,000 to 4,000 ft. per min. This adjustment may be made when the machine is running, whilst an easily operated starting gear allows the dies to be quickly threaded. A patent figure 8 system of stringing the wire utilizes all the cones as drawing cones, is considerably easier to thread, and allows of a cone step width of virtually double the amount usually provided.

The wire is traversed across the cones, thus minimizing the wear of the cones. The figure 8 stringing system enables a diebox to be used, which has several important advantages. Each die can be adjusted separately in any plane and set exactly at right angles to the wire, which reduces the wear of the dies and their tendency to wear out of round. Lubricant is carried to the dies by a miniature fountain in front of each die, through which the wire runs. The wire is not, therefore, drawn through an accumulation of dirt on its way to the die, and small pieces of wire and dirt falling into the tray do not find their way into the lubricant tank.

Other special features include an automatic spooling speed gear, a spring load jockey wheel for taking up stretch, means for ensuring a constant lay of wire on the spool and fine limit adjustment of the traverse. All shafts running at speeds over 100-r.p.m. are mounted on ball bearings. The drawing cones are supported in rubber-lined housings to prevent the transmission of vibrations to them; and all rotating parts are dynamically balanced. The drawing cones are of equal dimensions and interchangeable. Over-running is prevented by a device which automatically stops the spooling shaft. The power required to drive the machine varies from ½ h.p. to 2 h.p. according to the size of wire.

Messrs. B.S.A. Tools, Limited, Sparkbrook, Birmingham, find the industrial outlook much improved: all departments are busy and in the small tool sections the pressure is considerable and shows every prospect of being maintained. The machine tool side of the business is equally encouraging. Machines in progress include batches of 6 in. by 6 ft. multi-tool lathes, specially designed for second operation work, and high speed screw automatics.

Messrs. James Archdale and Company, Limited, Ledsam Street, Birmingham, are working at full capacity, including a night shift, and have sufficient work in hand to last for some months. A large number of special, as well as standard machines, are being put through the shops, mainly for the motor industry, although business outside this field shows signs of considerable expansion.

Messrs. George Swift and Sons, Limited, Claremont Ironworks, Halifax, have recently booked an order for 14 motor-driven radial drilling machines of the baseplate type 3 ft. 6 in. radius, for a home railway company. Orders have also been received for a number of machines required for shipyards in the United Kingdom which, with other orders on hand, will keep the works busy for a considerable time.

SHIPBUILDING.

The month of August proved to be the best month of the year for the booking of merchant ship contracts. Some 14 or 15 vessels of varying type and size were added to the work in hand in the shipyards during the month, and in no previous month of the year has such a satisfactory number of new orders been recorded. The orders have been well distributed over English, Scottish and Northern Irish yards.

Among the overseas orders placed with United Kingdom firms during August, are two dredgers—one for Burma and one for China—a motor-driven tug for Peru, a cargo steamer of about 270 feet in length for the Union Steamship Company of New Zealand, two large twin-screw refrigerated cargo motor-ships, each of about 15,000 tons for the New Zealand Shipping Company, and a cargo vessel of about 2,000 dead weight capacity for Poland. The Polish vessel is intended for regular cargo service between Gdynia and British ports and the order for this vessel was obtained, it is understood, in keen competition with Dutch and Scandinavian firms.

SMALL MARINE ENGINE EXHIBITS AT THE SHIPPING EXHIBITION, OLYMPIA.

Although the Shipping, Engineering and Machinery Exhibition which is held biennially at Olympia is largely devoted to the exhibition of heavy marine, auxiliary and industrial engines, machine tools, etc., this year's event which closed on the 23rd September, afforded ample opportunity to the motor boat and yacht owner to see the latest developments in the small marine engine and accessory industry. No fewer than 21 concerns displayed small marine Diesel and petrol-paraffin engines, while there were over 20 stands containing articles of interest to yachtsmen.

A feature of this year's Exhibition was the number of new small marine Diesel engines, no fewer than eight recently introduced models being on view:

> J. Samuel White and Company, Limited, of East Cowes, Isle of Wight, showed a new 4-cylinder Diesel engine with a 3¼-inch bore and 5-inch stroke developing 24 h.p. at 1,000 r.p.m.
>
> Among the exhibits in J. and H. McLaren's stand was a new model 4-cylinder McLaren lightweight marine Diesel, the cylinder bore being 3¾ inches and the normal rating 20 h.p. at 1,000 r.p.m.
>
> J. I. Thornycroft and Company, Limited, included among their exhibits a new 4-cylinder high-speed Diesel engine with a bore of 4 inches and rated at 36 b.h.p. at 1,200 r.p.m.
>
> The Bergius Company, Limited, showed three "Kelvin" Diesel engines and five paraffin marine engines. One of the Diesel motors is new in that it develops 11 h.p. per cylinder at 1,050 r.p.m. whereas the other types operate at 800 r.p.m.
>
> A new model "Gleniffer" high-speed Diesel among the exhibits of Gleniffer Engines, Limited, was a 3-cylinder engine developing 36 h.p. at 1,000 r.p.m. Two, four, six and eight cylinder sizes, rated at 12 h.p. per cylinder in each case, are being produced to this design.
>
> Most of the exhibits of W. H. Allen, Sons and Company, Limited, were of more interest to the shipping industry than to motor boating enthusiasts, but among the engines shown by this firm was one which has been specially designed as a main pro-

pelling unit for cabin cruisers and small commercial craft. It is a 4-cylinder, 4-stroke Diesel engine of the moderate speed type, developing 131 h.p. at 500 r.p.m. Starting is by compressed air, a compressor forming an integral part of the unit.

Of the two four-stroke marine Diesels shown by the Atlantic Engine Company (1920), Limited, one was a new 4-cylinder model having a bore of 6 inches and a stroke of 8 inches and developing 70 h.p. at 800 r.p.m. Except for the cylinder dimensions it is of the same general design as the other engines made by this firm.

The remaining new Diesel model shown was exhibited by Davey Paxman and Company (Colchester), Limited. This was a 4-cylinder four-stroke unit, having a bore and stroke of 6½ inches and 10 inches respectively, and developing 100 h.p. at 750 r.p.m. The engine is of the direct reversing type, a special feature of the design being that starting ahead and astern is controlled by a single handwheel, an inner wheel being provided for locking purposes.

In all some 43 marine oil engines were shown by the various well-known makers, and running exhibits were available for inspection on several stands.

The accessory exhibits were fairly comprehensive and included compasses and other nautical instruments, depth recorders, batteries, searchlights, fuel strainers, oil filters, propellers and a range of miscellaneous boat fittings, etc.

WIRELESS.

THE NATIONAL RADIO EXHIBITION, 1933.

The National Radio Exhibition, organised by the Radio Manufacturers' Association, was held at Olympia from August 15th to 24th, 1933. The attendance for the nine days, including one Saturday, was 209,155 which compares with 180,747 in August, 1932, when the show was open for eight days including two Saturdays. The show, as in previous years, was fully representative of the radio industry and admirably demonstrated the remarkable developments which have taken place in radio receiving apparatus during the past twelve months.

The outstanding features of this year's exhibition were the enormous increase in the production of super-heterodyne receivers, the general improvement of the battery receiver, which has brought its performance into line with that of the more ambitious mains receiver, and the heavy reduction in prices which has been brought about since last season.

It can be said with safety that the majority of manufacturers are now producing a super-heterodyne receiver capable of excellent performance under the most exacting present day conditions of reception. The 4 or 5 valve set of this type has definitely deposed the 3 valve "straight" receiver from the public favour. The latter was predominant last season. The super-heterodyne receiver can no longer be considered a luxury, for while it is true that the largest and most expensive sets are of this type, the smaller editions cost no more than "straight" sets of equivalent sensitivity. This important change has been brought about chiefly by the need for increased selectivity. The reduction in the number of valves necessary has been accomplished rather by improvements in design than by the use of multiple valves. The employment of the multiple valve is confined to the larger receivers which incorporate the latest refinements such as automatic volume control.

The smaller type of "superhet" receiver usually includes a band pass input tuner feeding a single valve first detector-oscillator for frequency changing, a single stage of I.F. amplification by variable-mu H.F. pentode, second detector and pentode output valve. It will be seen that this is a four-valve arrangement. One receiver was exhibited at the show having only three valves arranged in a super-heterodyne circuit.

There is no noticeable trend of design in the larger "superhet" receiver as in the case of the small sets. The large number of valves employed gives the designer a wide choice of circuit arrangement.

This season has seen the rapid development of automatic volume control in the United Kingdom and this added feature on receivers was a prominent one at Olympia. At last year's show only one or two receivers could boast of such a refinement.

Distant listening has come into favour but is so often marred by fading that some means of counteracting this limitation has been sought after for a number of years and found in automatic volume control. It was originally developed in connection with commercial radio telegraph receivers but has recently been adapted to the broadcast receiver.

There are many different methods of carrying out automatic volume control (A.V.C.) but it is customary to arrange the receiving circuits in such a manner that any increase in the second detector input of a "superhet" circuit increases the negative grid bias applied to the variable-mu I.F. amplifier so reducing its amplification. It is a well known fact that small changes of sound are not noticed by the ear and therefore the net result is apparent constant volume from the loudspeaker even with large changes of signal input. Thus, the volume variations of fading are smoothed out and one of its chief drawbacks eliminated. A.V.C. at the same time prevents overloading of the receiver on very strong signals. There are a number of variations of the A.V.C. circuits which give control on signals above a predetermined level, prevent the rise of amplification during the process of tuning when no signal is received, and, with the use of an additional valve ensure that nothing at all is heard unless the set is tuned accurately to a station.

The development of A.V.C. has brought into being a new multiple valve termed the duo-diode-triode, one diode portion of which provides signal rectification, the other A.V.C. and the triode acts as the first I.F. amplifying valve. Copper oxide rectifiers have also been developed as combined signal detectors and A.V.C. devices.

Among receivers which do not employ the "superhet" principle, the three stage general purpose set, comprising the H.F.-Det.-L.F. combination, is prominent. No epoch making development has provided publicity for this type of receiver but the fact that attention has been directed along new lines does not imply that it has become a back number. The performance has been improved by detailed refinements such as iron cored tuning coils, etc., which provide the necessary increase in selectivity. In spite of the development of the H.F. pentode, which has considerably assisted the designer in obtaining the stability of a large number of H.F. stages, further manufacturing difficulties regarding the alignment of tuning circuits and the provision of constant amplification over the whole wave range have yet to be overcome before this class of receiver can challenge the all round efficiency of the "Superhet".

There is no doubt however that a large number of listeners still adhere to this "straight" class of receiver which is capable of very quiet and worthy performance. One such receiver of very outstanding design was exhibited and claimed to give a performance comparable with a "superhet" of equivalent sensitivity. It comprised no fewer than seven stages of amplification, the first two being at radio frequency, silent automatic volume control and constant amplification on all wavelengths.

The two valve receiver has been improved by the introduction of iron cored inductances which have given it a much needed increase in selectivity.

The performance of battery sets has been so vastly improved that listeners having no electricity supply available can now purchase receivers with the assurance that they will obtain results comparable with those obtained from the more ambitious mains receivers of last season. This improvement has brought about a remarkable revival of interest in this class of receiver.

The Class "B" and the Quiescent Push-Pull systems of low frequency amplification are responsible for this revival. Not only can better reproduction be obtained from circuits using these systems but even with large acoustic outputs the H.T. supply requirements can be reduced to within the capabilities of the medium capacity battery. These forms of amplification have become firmly established in battery set practice during the last few months. Both systems are designed to reduce the H.T. current drawn from the battery during periods of quiescence in the received programme. The former system employs two valves, one a driver, the other a multiple valve embodying two separate sets of electrodes within the same glass envelope; the latter system uses two heavily biassed pentodes connected in push-pull.

The introduction of economical output stages has been the means of stimulating the development of the battery radiogramophone. Until this year it has been difficult to produce an output from a battery receiver in keeping with the size of the average radiogramophone and at the same time restrict maintenance costs to within reasonable limits. The new systems of output stages has definitely removed this difficulty and, doubtless, there will be an increasing number of sets of this class on the market during the coming season.

Portable and transportable receivers have naturally been vastly improved by the use of the Class "B" output system. The practice of fitting moving coil loudspeakers in sets of the latter class has extended and is now almost universal but only a very few receivers of the former type are so fitted. The "superhet" principle has been applied to a number of these receivers with great success and a few can even boast of A.V.C.

Four manufacturers are preparing to cater for the radio requirements of motorists. How far this development will be carried remains to be seen but it is worth while noting that a number of motor car manufacturers have signified their intention of providing the necessary aerial in the roofs of their 1934 production. For good results such a receiver must obviously be highly sensitive, due to the limited pick-up of even the best aerial that can be installed, and furthermore an effective form of A.V.C. must be provided to compensate for the normally severe fluctuations of signal strength which occur when travelling along a road. This type of set obtains its power supply from the starting and lighting battery of the car. Careful design of the ignition system is essential in order to prevent static interference which would otherwise occur from this source.

The demand for kit sets has been decreasing for a number of years and consequently there are few kits of parts available for home constructors this year. But in spite of this there is still a wide choice of sets ranging from simple "straights" to "superhets" of the most ambitious type. Of the latter class one manufacturer has placed a seven valve battery set on the market. The design is interesting and includes amplified A.V.C., Class "B" output and full tone control. A prominent firm manufacturing copper oxide rectifiers is sponsoring an "all metal" kit "superhet" set for the first time this season.

A new tendency in design has been further extended this season, that of the universal AC-DC receiver. Receivers of this type are now quite numerous. Perhaps the outstanding set in this class is the first "midget" receiver of United Kingdom manufacture. It remains to be seen whether this class of small receiver will attain the height of popularity that was achieved in the United States of America, the country of its origin. The universal mains idea is not confined to "straight" sets but is available in a number of "superhets".

Short-wave receivers and converters have increased in number and improved in performance. The demand for this type of set has been stimulated by the opening of the B.B.C. Short-wave Empire Station. One manufacturer has now placed five receivers on the market which have been specially designed for use on all wavelengths in tropical countries. Another well-known firm who specialise in this type of apparatus was exhibiting improved receivers and a large variety of components.

It would appear that closer attention has been paid to cabinet design this season. The horizontal type of cabinet has come into favour. In many cases such sets can be supplied with pedestals. Detachable loudspeaker frets are fitted by one firm in their new receivers in order that the internal silk may be changed to match any furnishing scheme.

Prices of radio apparatus have been drastically reduced in recent months. The table below compares the existing prices with those in force last year for the more popular types of receivers.

		1932.		*1933.*	
		£	s.	£	s.
1. Two valve (Det-LF)	Battery	4	10	4	10
	Mains	10	0	7	10
2. Three valve (HF-Det-LF)	Battery	14	14	7	7
	Mains	18	18	11	11
3. Small "Superhets"	Battery	not available		11	11
	Mains	,,		13	13
4. Medium "Superhets"	Battery	,,		13	13
	Mains	23	0	15	15

In responsible quarters the view is taken that prices have reached the lowest point consistent with the present high state of British workmanship.

There was a marked improvement in the design of components shown at this year's Exhibition and the developments which have taken place during the past year can, no doubt, be regarded with satisfaction. The outstanding achievements have been the provision of new ranges of tuning coils and components for the new output system for battery receivers.

Up to the present time coils for use in the H.F. circuits of a radio receiver have been of the air-cored type but in the future coils containing a magnetic core will probably be universally adopted. In fact many of this year's receivers already contain these new iron-cored inductances. These coils are very compact and have enabled manufacturers to produce receivers which are not only more sensitive but also more selective.

The originators of the iron-cored inductances for tuning circuits can now supply coils for nearly every conceivable purpose. Some eight manufacturers are now producing coils of this type.

Two manufacturers are introducing "permeability tuning." In this type of tuning unit the inductance is variable and the capacity fixed, the reverse of the usual method of tuning a resonant circuit.

The improvements to variable condensers which have been effected are in the main directed towards reduction in size. Prices have been reduced slightly and workmanship is better than ever.

Short-wave components were exhibited in larger quantities this year, and manufacturers are now in a position to meet all the requirements of the buyer in this line.

The enormous success of the new output system for battery receivers, Class "B," has created a certain market for L.F. components. A large number of component manufacturers are now producing the special transformers, chokes and complete conversion units.

Many sets otherwise obsolete can be given a new lease of life by the addition of new loud-speaker units, incorporating a complete "Class B" stage with input and output transformers and valve, which are now being produced by most of the loud-speaker manufacturers.

There was a large variety of mains components, battery charging equipments, L.T. and H.T. batteries, gramophone pick-ups and motors, and testing equipment on view. Most of these articles can claim minor improvements over last year's exhibits.

With the increase in sensitivity of the modern receiver, considerable interest is now being taken in the prevention of interference and the outcome is a notable increase in the number of interference suppressors available both of the mains filter and inter-aerial types.

The sale of separate loud-speakers has declined during the last few years owing to the universal adoption of the loud-speaker as an integral part of the receiver. The small moving coil loud-speaker unit continues to hold its popularity with set manufacturers and home constructors. Prices have remained stationary, but improvements in design and construction are noticeable. Miniature units are now being produced in larger numbers to cater for the increasing demand for this class of speaker.

All the prominent manufacturers of valves were exhibiting at the Show, together with a number of newcomers. The display of valves portrayed the growth of the multiple valve, the development of which has been so rapid that almost every firm was exhibiting at least one type. This valve is exemplified in the duo-diode-triode type, the function of which has already been explained. There are others such as the duo-diode-pentode, single-diode-tetrodes, and "Class B" output valves. It is interesting to note that these involve no new principles but may be replaced by a suitable number of ordinary valves.

There have been further developments in multi-electrode valves and an interesting newcomer is the "Heptode," 5 electrodes of which are grids. This valve fulfils the function of a variable-mu first detector valve and a separate triode oscillator for "superhet" frequency changing purposes. H.F. pentodes have come to the fore, they are similar to the original screen-grid tetrode, but an auxiliary grid is added to increase its voltage handling properties. Battery valves of this type will no doubt become popular owing to their immunity from overloading when the high tension supply is limited. These developments in the multiple valve are a distinct advance as no combination of ordinary valves can produce equivalent performance.

THE NO-RO-CO. CONVERTER.

For the conversion of D.C. to A.C. for the mains supply to radio receivers.

Manufacturers of radio apparatus in the United Kingdom have concentrated on the development of the A.C. mains receiver during the last few years. The market for D.C. mains receivers in the United Kingdom has rapidly contracted owing to the fact that more and more electric supply systems have been changed over from D.C. to A.C. Consequently the development of the D.C. mains receivers has not received much attention from manufacturers.

The potential buyer, whose supply is D.C., has often been deterred from purchasing a receiver which does not incorporate all the latest refinements existing in the equivalent A.C. receiver. This state of affairs need no longer exist for there is a new device on the market which enables A.C. mains receivers to be operated from D.C. mains.

The No-ro-co, by which name the device is called, is a non-rotary converter working on a voltage from 200 to 250 volts D.C., and giving an output of up to 60 watts at approximately the same voltage. Models will also be available for D.C. mains having other voltages than those given above.

The instrument can be installed in a cupboard or cellar, as near or as remote from the receiver as is convenient and in these circumstances results obtained are exactly the same as from A.C. mains.

Tests have been carried out which entirely endorse the claims of the makers.

This instrument, which sells at a very reasonable figure, is manufactured by the Wilrose Co. (B'ham), Ltd., 47, Cornwall Street, Birmingham, from whom full particulars can be obtained.

TEXTILES.

WOOL.

Although the home demand is responsible for the greater part of the improved employment in the wool textile industry it is not entirely so, as is shown by the continued encouraging increase in exports. Much larger quantities of all semi-manufactures were exported during August last than in the same month in 1931 and 1932 and the eight months totals this year are also considerably greater than in the corresponding periods of the two previous years.

Furnishing fabrics and mohair and alpaca fabrics still lag behind, but flannels, and woollen and worsted tissues show the same tendency as semi-manufactures and nearly a million and a half square yards more woollens were exported in August, 1933, than in August, 1932, and three and a half million more in January/August this year than in the corresponding period of 1932.

The exports of worsted tissues were nearly 900,000 sq. yds. more in August, 1933, than in August last year and in eight months the 1932 quantity was exceeded by nearly two and a quarter million sq. yds.

The increase in raw material prices is gradually being passed on to spinners and manufacturers, and although it is not yet possible to sell pieces at replacement costs, the gap is slowly being bridged and wholesale fabric buyers appear to be more disposed to pay the prices asked by manufacturers.

The outlook for next spring trade is reported to be better than for several years and more looms are in commission.

Employment in the heavy woollen district is good and in addition to home trade demand on a large scale there has been an appreciable increase in orders for export, particularly from the continent, and inquiries from the Far East have been more numerous.

Several Huddersfield firm manufacturing costume tweeds are working overtime and at the moment the women's wear trade is more active than the manufacture of men's wear fabrics.

In recent years there has been a big increase in the production of light-weight tweeds for women in the Huddersfield district, and at present there is a little boom in the output of these cloths.

They are being made in very bright colours in many different styles, such as hopsacks, chevrons, bird's eyes, checks, and stripes.

Lustre linings.

Lord Barnby recently made an appeal for a return to lustre linings which have been displaced by artificial silk and it is understood that a big drive is shortly to be made with the object of repopularising these lustre linings—that is, linings made with a cotton warp and a worsted (or mohair) weft. Several big firms in Bradford and district are reported to have taken the matter up.

There is no doubt that if this type of lining were used instead of the large amount of artificial silk material now employed, the excess of crossbred wool which now exists would be absorbed, a tremendous number of spindles now idle would be running again, and many firms in the West Riding would be busy once more.

COTTON.

A great variety of opinion existed among private authorities as to the American crop outturn during the first week in September, and uncertainty as to what the official estimate would be made buyers very cautious. The general tendency of prices was downwards, and this was temporarily accentuated by the publication of the Bureau report.

Yarn business has not been very lively, though spinners were expected to benefit from the stoppage caused by the annual Oldham holidays at the end of August.

In the cloth trade, as the raw cotton market recovered from the fall which followed the American crop report, so the volume of enquiry increased, and from the Far East came enquiries for cloths which had not been bought for over a year. Light cloths have been in demand for India—jacconets going to Calcutta, and mulls to Karachi and Bombay. Inquiry from China is general, but has not so far led to large orders. South America has bought some fair lots of prints and some specialities, while a miscellaneous trade, in which rayon and mixture cloths were noticeable, has been done with the Dominions.

The continent has bought twills, sateens and prints, and a quiet but steady home demand has persisted.

The export figures for August show a decline from July in the total amount of cloth exported, but an appreciable increase in yarn.

	August, 1933.	*July, 1933.*	*August, 1932.*
Cotton Yarn.	*1,000 lbs.*	*1,000 lbs.*	*1,000 lbs.*
Grey	9,894	9,351	7,948
Bleached and dyed . .	1,138	1,061	1,184
Cotton Piece-goods.	*1,000 sq. yds.*	*1,000 sq. yds.*	*1,000 sq. yds.*
Grey	25,612	25,114	25,065
Bleached . . .	44,056	45,348	64,651
Printed	31,476	34,025	37,950
Piece-dyed . . .	40,842	43,204	45,649
Yarn-dyed . . .	6,977	6,987	7,591
TOTAL .	148,964	154,678	180,906

LINEN.

The scutching of Irish flax was begun at the end of August and it appears to be of good medium quality. The first market of the season will be held about mid-September, but it will probably be October before sizeable lots appear on the market.

Yarn prices were fairly steady, and shipments of flax and hemp yarn were heavy during August. Exports of these yarns were valued at £67,683 in August last as compared with £31,374 in August, 1932, and £29,676 in August, 1931.

Exports of piece goods continued to be high, and, in spite of the depression in the United States of America, or perhaps because of the threat of higher prices there, the shipments to that market were most encouraging. The value of linen piece goods exported to the United States of America in August, 1933, was £116,118 as compared with £52,081 in August, 1932, and £88,759 in August, 1931. A greater value of linen piece goods was also shipped to Denmark, China, Brazil, Argentina, British South Africa and Canada last month than in August, 1932, or in August, 1931, the most considerable increases being in respect of shipments to Brazil and China.

A most encouraging feature during the month was the revival, after a long period of regression, of exports of Damask Table Linen. Exports of Damask Table Linen were of the value of £63,784 as compared with £56,201 in August, 1932, and £54,927 in August, 1931.

The value of linen goods imported into the United Kingdom in August was £25,161, as compared with £30,615 in August, 1932, and £59,943 in August, 1931.

The value of linen goods exported from the United Kingdom in August was £481,963, as compared with £338,023 in August, 1932, and £416,039 in August, 1931.

The value of linen goods exported from the United Kingdom during the eight months ended 31st August, 1931, 1932 and 1933, were respectively, £3,942,474, £3,465,678 and £3,585,310. The quantities of linen piece goods exported during the same periods were 42,120,200, 45,215,300 and 50,909,300 square yards.

POTTERY AND GLASSWARE.

In accordance with custom all factories in the Potteries closed down early in August for the annual holidays. A general resumption in production has now been made but it is evident that, owing to lack of demand, many factories were closed beyond the normal period.

There is evidence of some improvement in the demand to meet home trade requirements, but orders for export trade are still below the average. In this connection, however, it is interesting to note that the exports of pottery during August, 1933, were valued at £254,179 compared with £239,090 for the corresponding month of 1932, an increase of £15,089. This is the first month for a very long period that an actual increase in the value of exports over the corresponding month of the previous year has been achieved.

Following are details of the total quantity and value of the exports of pottery of all classes (excluding bricks) for the first eight months of this year, with comparative figures for the two preceding years:—

	Quantity cwts.	*Value* £
January to August, 1933 . .	1,551,282	1,820,882
January to August, 1932 . .	1,711,050	1,991,255
January to August, 1931 . .	2,120,747	2,297,594

The following statement gives details for each section of the industry:—

Section.	*Value of 1933.* £	*Exports. 1932.* £	*Decrease.* £	*Percentage of decrease in 1933 compared with 1932.*
Tiles (all classes) . .	124,607	133,041	8,434	6·3
Sanitary ware . .	382,842	392,578	9,736	2·5
Chinaware . . .	133,837	148,420	14,583	9·8
Electrical porcelain .	38,311	75,489	37,178	49·2
General earthenware .	934,080	990,157	56,077	5·7
Stoneware . . .	14,983	22,782	7,799	34·2
Refractory goods and clay products not elsewhere specified .	192,222	228,788	36,566	16·0
TOTAL .	1,820,882	1,991,255	170,373	8·6

The following table deals with the various export markets for the periods in question:—

Market.	*Value of Exports.*		*Inc. or Dec.*		*Inc. or Dec. per cent over 1932.*	
	1933.	*1932.*	*Inc.*	*Dec.*		
	£	£	£	£	*Inc.*	*Dec.*
Canada . . .	325,835	422,366	—	96,531	–	22·9
United States . .	159,072	181,912	—	22,840	—	12·6
Irish Free State . .	162,819	187,120	—	24,571	—	13·1
Australia . . .	169,801	137,411	32,390	—	23·6	–
Argentina . . .	96,635	85,141	11,494	—	13·5	—
Brazil	89,219	53,896	35,323	—	65·5	—
South Africa . .	98,973	128,410	—	29,437	—	23·0
India	77,135	99,818	—	22,683	—	22·7
New Zealand . .	60,458	78,693	—	18,235	—	23·2
France . . .	16,218	21,459	—	5,241	—	24·4
Other countries . .	564,687	594,729	—	30,042	—	5·1
Total .	1,820,852	1,991,255	—	170,373	—	8·6

Following are figures of the value of exports of glass and glassware during the first eight months of this year, with comparative figures for the two preceding years.

	£
January—August, 1933	822,167
January—August, 1932	834,568
January—August, 1931	930,529

For the month of August, 1933, the value of the exports of glass and glassware was £118,703 compared with £97,782 for the corresponding month of 1932, an increase of £20,921. This improvement was mainly in the section producing domestic and fancy glassware and plate and sheet glass.

PAPER.

Reports from the various sections of the paper trade show a decidedly better tone, which is particularly gratifying, since, at this time of the year business is usually quiet. Practically all grades of paper are sharing in the improvement which is occurring in the volume of business being placed, except esparto paper, the production of which has for the time being outstripped demand.

The figures relating to the United Kingdom exports of paper and paper stationery, etc., during the first eight months of each of the years 1931, 1932 and 1933 are as follows—

	cwts.	£
1933	2,431,163	3,897,652
1932	2,616,956	4,347,061
1931	2,110,356	4,135,139

Following is a detailed table showing the export from the United Kingdom for the first eight months of 1933, with the comparative figures of 1932:—

Paper.	*1933* cwts.	*1932* cwts.	*Inc.*	*Dec.*	*Inc.* %	*Dec.* %
Printing . .	1,618,320	1,756,171	—	187,851	—	7·2
Writing . . .	112,729	125,358	—	12,629	—	10·06
Packing and wrapping .	99,360	96,125	3,235	—	3·2	—
Tissue	8,704	11,716	—	3,012	—	25·6
Coated paper—						
Printed and embossed paper hangings.	55,901	60,960	—	5,059	—	8·3
All other . . .	55,419	56,988	—	1,569	—	2·7
Roofing paper .	19,171	15,970	3,201	—	11·4	—
Stationery . . .	111,605	126,272	—	14,667	—	11·6
Paper bags . .	21,080	39,114	—	18,025	—	46·08
Boxes and cartons .	65,795	71,549	—	5,754	—	8·04
Cardboard, millboard, etc.	105,175	116,097	—	10,922	—	9·3
Playing cards . .	3,977	4,462	—	485	—	10·9
Other sorts . . .	153,915	136,174	16,741	—	10·8	—
Total .	2,431,163	2,616,956	—	185,793	—	7·1

Ink.

Messrs. Shuck Maclean & Co., Ltd., printing ink manufacturers of Gunpowder Alley, London, E.C. 4, have recently placed on the market, under the name of "Cartis" an ink to obviate the use of carbon paper in duplicate books, etc. This ink is claimed to be as easy to work as ordinary letter-press ink. The method of use is to print the ink on the back of the top leaf, the film of colour being transferred under writing pressure. There is, therefore, no need for a carbon paper to be inserted between the leaves. The ink is stocked in six colours including black and remains effective for a considerable period. It is understood that it is meeting with a good reception from the trade.

Book-End Papers.

Mr. R. P. Sleeman of 144, Shaftesbury Avenue, London, W.C. 2, has introduced a range of book-end papers produced by a new process. The effects secured are novel, and the hardness which is generally associated with printed papers is entirely absent. It is claimed that while the papers have the appearance of having been produced by hand they are no more expensive than those usually employed in this class of work. In addition to their application to book-ends they are suitable for use as cover papers for booklets, etc., and special designs for this purpose are contemplated.

AVIATION.

BRITISH AEROPLANES FOR SURVEY WORK IN AUSTRALIA AND SPAIN.

Airborne Cameras to search for Gold.

Plans for extensive aerial survey operations in Australia and Spain, announced within the past few days, provide further evidence of the trend towards adoption of the airborne camera in mapping and investigation of uncharted country. Air survey has been weighed in the balance, but not found wanting; there is proof and to spare in experience gained in many countries that aerial photography provides all of the essential information at less cost and in a fraction of the time needed for ground survey. Further, many regions which cannot possibly be surveyed from the ground—for example, the Sudd region of the Sudan, a district essential in the irrigation system of the Nile valley—have yielded their secrets to the flying machine.

Gold mining regions in Western Australia, stretching over some 1,200 miles of country, much of it desert, will be attacked from two de Havilland twin-engined " Dragon " biplanes belonging to the managing contractors, H. Hemming and Partners, appointed by Austral Development, Ltd., on behalf of the Western Mining Corporation, Ltd. Photography of about 88,000 square miles from the air may be involved, to help the mining geologists to locate ground formations in which gold and other metals are likely to be found. Recent developments in aerial photography enable geological faults and " contacts" to be discerned, providing invaluable, and generally precise, indication of the presence of metal deposits. Subsequent ground survey of the likely areas will check the results of the aerial work.

Admiral Sir Percy Douglas, who has recently retired from the post of Hydrographer to the Navy, is advising on the ground organization; he is responsible for an ingenious application of radio to air surveying, employing motor lorries equipped with wireless sending and receiving apparatus to maintain constant communication between the ground base and the aeroplanes. Wing Commander F. V. Laws, Commandant of the School of Photography, Royal Air Force, will be manager of the air survey expedition; he it was who invented the camera which was used by the flying services during the war and led ultimately to the production of the "Eagle" cameras now used in air survey work all over the world. Two Australian pilots, Captain C. W. Snook and Flight Lieutenant S. C. Campbell, will be with him when flying operations begin early next year.

The cabins of the "Dragon" survey 'planes will be modified to meet the requirements of aerial survey flying; in addition to radio telegraphic and telephonic gear they will carry special navigational instruments and the latest types of electrically actuated and controlled "Eagle" cameras.

The Spanish Government has ordered four "Fox Moth" light cabin biplanes for work under the Government Topographical Survey Department. Maps of Spain, generally speaking, are poor and inaccurate. Much of the peninsula has never been properly mapped, and there is great scope for the airborne camera.

The standard model of the "Fox Moth" is selected for the work, but the internal furnishing and equipment are planned to provide increased range and quick and comfortable handling of the air survey gear. Fitted with a single "Gipsy Major" 130 h.p. engine, the "Fox Moth" reaches a maximum speed, with full load on board, of 113½ miles an hour, cruises at 95 m.p.h. and can climb to a "ceiling" of 11,500 feet above sea-level. Handley Page automatic slots, providing easy and efficient control at all points of the speed range, are fitted to the wings.

An extra fifteen-gallon fuel tank is installed in the cabin, in the space occupied in the standard touring model by luggage; this and the standard 25-gallon tank enables the machine to cruise in still air for 650 miles. The photographer sits in a swivelling chair in the centre of the cabin, and can move readily from one position to another as demanded by the exigencies of his work. When photography is not going on this chair can be moved backways and sideways to a position where it locks beside a second, permanent seat.

In the "Fox Moth" the pilot's cockpit is aft of the wings and separate from the cabin forward; he communicates with his passengers through a porthole. The Spanish survey craft are equipped with unusually elaborate flying instruments, including a specially sensitive "rate of climb" indicator, all of them designed to assist the pilot in maintaining accurate and level flight over the set course—an essential factor in air survey work. A plate-glass window in the floor of the cockpit enables the pilot to view the ground over which he is flying.

AERIAL SURVEY.

A recent address by the Australian scientist Dr. Woolnough to the World Petroleum Conference in London greatly impressed all who were present. He spoke of the value of aerial survey in prospecting for oil, and was able to show how the aerial camera could reveal much that was unknown about the remote regions of Australia. Features of the ground configuration not easily discerned from close quarters have been revealed by long-distance photography from an aeroplane.

It is interesting, in this connection, to learn that for purposes of aerial survey a special aeroplane has been designed by English manufacturers. It is known as the "Gloster A.S. 31": and already it holds records for speed and accuracy in extensive survey work in Rhodesia. Cruising at 100 miles an hour it can remain in the air on a normal fuel load for seven hours. Transparent panels provide perfect vision for pilot and photographer. Behind the cockpit is a compartment for the surveyors, and they have at their disposal elaborate photographic apparatus and also a dark room for development. Such a machine as this is invaluable where accurate records of wide areas have to be obtained in a short time. The machine can climb to 20,000 feet and can travel at from 40 to 140 miles an hour—thus enabling the occupants to do slow and careful survey work, and to return to their base at a high speed.

AUTOMATIC PILOTS.

The U. K. Imperial Air Services, one of the greatest civil aviation organisations in the world, has a remarkable record for safe flying. This is due not only to the quality of the machines used and to the ability of the pilots, but also to the many novel devices employed to render safety and certainty in flight doubly assured, On the services from England to the Continent of Europe, for example, directional wireless is used. By means of it a pilot can, if fog arrives, be told his exact position from three land stations with which he is in constant communication. Such a system is possible only on a highly organised air route, but on less developed routes—Cairo to Capetown, for example—there is another very efficient method, the devices for which are carried on the planes themselves.

Perhaps the most remarkable device of all is the "automatic pilot" which depends, not upon wireless, but upon the use of a special gyroscope. Before a flight the pilot works out his course, and sets the automatic pilot to keep his aeroplane to this course. From the moment it begins to work the mechanical device will not permit the aeroplane to veer, dive or do anything to take it away from the required course. The appropriate control immediately works to bring it back, not violently, but steadily and relentlessly. If the wind should change its direction, the automatic pilot proves its remarkable value to the utmost, for it remains quite unaware of such factors and continues to keep to the line of flight required. Wireless and the automatic pilot, valuable as they are, are only two of the many devices invented and used on U.K. machines. The aim of U.K. manufacturers is safety, and the same policy is followed by all the commercial aviation companies. For it they will sacrifice everything else.

THE U. K. PAPER INDUSTRY.

(*By R. S. Dove, Chairman of the Paper Exporters Section of the London Chamber of Commerce.*)

From almost mediaeval days the U.K. has been amongst the world's foremost paper producing countries. Before John Dickinson erected in 1804 and operated in Hertfordshire the first plant to produce paper successfully by machine, the beautiful wares of U.K. makers of hand-made paper were known and in eager demand throughout the globe. England is still the greatest centre of hand-made papermaking and the products of U.K. Mills remain the world's standard for strength, quality and charm.

The perfecting of the paper machine during the nineteenth century revolutionised the industry. It synchronised with the new era of universal education that has created literally hundreds of millions of readers and writers, all consumers of the paper mill's product. Throughout this period of expansion and development the U.K. has remained in the van of progress. It was an Englishman, Capt. Edward Partington, afterwards created Lord Deveidale for his signal services to U.K. industry, who in the early 1880's was the first to exploit the sulphite process of treating coniferous timbers for papermaking, a process which is still standard practice and makes possible the whole vast world-wide industry of to-day. In the production of high class sulphite wood, printing, writing and bond papers, Great Britain plays a leading part and exports great quantities.

The County of Kent was always famed for the purity of its high grade writing, ledger and drawing papers, but it was not until the nineties of last century that the great possibilities of the Thames Estuary as a centre for the mass production of paper were first appreciated, since then the development has been phenomenal. To-day, the County is the largest producer of paper in any single district in the world. Its mills are equipped with the finest, most modern plant and it is producing at competitive prices vast quantities of newsprint, Kraft wrapping, sulphite printing and other papers in important demand, while it has lately become the centre for the manufacture of the new British productions of Greaseproof and Vegetable Parchment.

The County produces approximately 50 per cent. of the 1,400,000 tons of paper made in U.K. annually.

Across the river on the Essex shore, in one of the most up-to-date mills in existence, is running the world's largest box-board machine which alone has an output of over 2,000 tons of paper-board each week. This is a branch of the trade that has received special attention from industrialists in recent years and there are now many mills in various parts of the country that for efficiency and economy of production challenge comparison with all comers.

Newsprint naturally forms a large proportion of the total tonnage figure mentioned above. The U.K. Newsprint mills are equipped with the most up-to-date plant (one mill is now erecting the world's second largest machine), operated under thoroughly modern conditions. The fact that United Kingdom mills, at a time when those of most other countries are only partially occupied, are in full production, is a striking commentary on the efficiency of this important branch of the industry.

The U.K. is also the home of the very extensive Esparto grass paper industry, its product being exported to every land. This is chiefly a Scottish industry but it is also established in England. The many mills engaged in this trade are the last word in modern practice, producing a specialised type of book and writing paper that cannot be matched in any other country, the use of Esparto as a raw material being confined to the U.K.

Any review of the U.K.'s paper industry would be incomplete without mention of the very important group of mills manufacturing high grade tub-sized rag papers. United Kingdom water marks are known, and seen in every country, while for reliability and uniformity of quality these papers are incomparable though fully competitive in price.

Recently the manufacture of Kraft received a stimulus and not only have old mills been converted but new ones have been erected for the mass production of this universally popular strong wrapping paper. It can be confidently claimed that the U.K. plants now embrace the world's biggest and most modern machines.

The paper industry is of such a varied character that it is impossible in a brief article to deal adequately with all its activities, but it can be said that the U.K.'s manufactures of coated papers and boards—invented and first produced in England—white pulp and ivory boards, gummed paper, insulating papers, photographic base papers, bible papers, cigarette papers, blotting papers and other specialities are in the very forefront of quality and value and are exported to every part of the globe. An English mill is now producing commercially a paper —condenser tissue—of the miraculously light substance of 7 grammes per square metre and of a thickness of only 1/3600th of an inch, an unparalleled papermaking achievement.

Notwithstanding its age the industry is full of vitality and it can be stated without fear of contradiction that to-day the U.K. possesses the most prosperous papermaking industry in the world.

CATALOGUE LIBRARY.

The undermentioned catalogues relating to United Kingdom manufacturers have recently been received and may be consulted by *bonâ fide* firms or individuals at the Office of His Majesty's Senior Trade Commissioner in India, Fairlie House, Fairlie Place, Calcutta.

Names and Addresses.	*Description.*
Gunn & Moore, Ltd., 49, Carrington Street, Nottingham.	Sports Goods.
Hopkinsons, Ltd., Britannia Works, Huddersfield.	Boiler Mountings and Valves.
* The Jackson Electric Stove Co., Ltd., 143, Sloane Street, London, S.W. 1.	Electrical Cooking and Heating Apparatus.
* Molins Machine Co., Ltd., Evelyn Street, London, S.E. 8.	Molins Carton Making and Cigarette Packing Machinery; Cigarette Making Machinery.
E. J. Riley, Ltd., Willow Mills, Accrington.	Sports Goods.
Rootes Ltd., Devonshire House, Piccadilly, London, W. 1.	Motor Cars.
Rowntree & Co., Ltd., York.	Cocoa, Chocolates and Confectionery.
Singer & Co., Ltd., Coventry.	Motor Cars and Motor Vans.
Wm. Walker & Sons, Ltd., Rose Hill Tannery, Bolton, Lancs.	Golf Requisites.
Wolseley Motors (1927), Ltd., Ward End, Birmingham.	Motor Cars.

* Catalogues marked with an asterisk have also been received in the Office of His Majesty's Trade Commissioner, 3, Wittet Road, Ballard Estate, Bombay, where they may also be consulted by *bonâ fide* firms or individuals.

TRADE ENQUIRIES.

The names of the United Kingdom firms referred to in the enquiries mentioned below will be furnished to reputable firms on application to His Majesty's Senior Trade Commissioner, Post Box No. 683, Fairlie House, Fairlie Place, Calcutta.

No. 742-33.

A United Kingdom firm manufacturing all types and principles of engine fittings and boiler mountings, valves for oil companies, and marine fittings are desirous of appointing an agent.

No. 890-33.

The export agents of a United Kingdom manufacturer of Malted Yeast which can be supplied either as powder or in tablets, are desirous of getting in touch with firms in India who would be prepared to undertake an agency for this preparation.

MGIPC—L—308HMTC—1-11-33—1,050.

H. M. TRADE COMMISSIONERS IN INDIA.

Calcutta—

Sir Thomas M. Ainscough, C.B.E.,
His Majesty's Senior Trade Commissioner in India and Ceylon.

Mr. R. B. Willmot,
His Majesty's Trade Commissioner at Calcutta.
Post Box No. 683, Fairlie House, Fairlie Place.
Telegraphic Address.—"Tradcom, Calcutta."
Telephone No.—"Calcutta 1042."

Bombay—

Mr. W. D. M. Clarke,
His Majesty's Trade Commissioner at Bombay.
Post Box No. 815, 3, Wittet Road, Ballard Estate.
Telegraphic Address.—"Tradcom, Bombay."
Telephone No.—"Bombay 23025."

Ceylon—

Imperial Trade Correspondent,
The Principal Collector of Customs, Colombo.

With Compliments.

NOVEMBER 1933

The
Commercial Bulletin

A Monthly Review of Official and other
announcements relating particularly
to British Export Trade

Issued by
HIS MAJESTY'S SENIOR TRADE COMMISSIONER
IN INDIA AND CEYLON.

FAIRLIE HOUSE,
FAIRLIE PLACE,
CALCUTTA.

CONTENTS.

	Page.
General	1
British Industries Fair	2
Finance	3
Contracts Secured	7
Iron and Steel	9
Machine Tools	10
Automobile and Allied Trades	12
Shipbuilding	18
Textiles	19
Pottery and Glassware	23
Moulded Products	25
Electric Lamps	26
Aviation	27
Catalogue Library	30
Trade Enquiries	31

GENERAL.

Evidence of the solidity of Britain's trade recovery continues gradually to accumulate. There was a drop last month of over 74,000 in the number of persons out of employment and an expansion of 86,000 in the aggregate of people in work. Comparison over a twelve months' period shows that the total of unemployed has fallen by 521,000, while no less than 660,000 more insured workers are in employment than at this time last year when allowance has been made for persons then directly affected by the dispute in the cotton trade. These are heartening figures and the widespread improvement in the staple trades is a very satisfactory feature. The iron and steel trades, the electrical and motor engineering trades, and the boot and shoe trades are all employing thousands more workpeople. It is reported from a reliable source that more than fifty per cent. of the woollen workers who were unemployed in January are now back at work, and a similar position obtains in the hosiery trade. Even agriculture is able to report slightly better conditions with a fine corn crop and a small profit in prospect on wheat and barley.

That the iron and steel industry continues to move forward is apparent from the September returns. The production of steel exceeded that of August by nearly 120,000 tons and, although the total output of pig iron was slightly less than in August, the daily rate of production was higher.

The general trade improvement is reflected in the railway traffic figures, the second half of the year so far as it has gone-bearing a definitely brighter complexion. During the first six months the four groups suffered a gross decrease in receipts of £3,604,000; for the second half-year to date a gross increase of £1,221,000 has been secured.

The figures of overseas trade are definitely more favourable. The noteworthy feature for September is a gain of £5,997,000 in United Kingdom exports and of that as much as £4,891,000 is in manufactured goods, comparison being made with the corresponding month of last year. Imports in September were valued at £3,531,000 more than in September, 1932, but the major portion of this increase was in raw materials. It is of special interest to observe that the fall in United Kingdom exports during the completed nine months of the year has been reduced very materially, the figure at which it stands at the end of the third quarter being no more than £2,717,000. The upward movement of raw materials into the United Kingdom gradually exceeds the rise in outward shipments. At the same time the bill for manufactures arriving has been reduced by £9,490,000 over the nine months, whilst sales of United Kingdom manufactures abroad have fallen by only £800,000.

Obviously the process of correction is going on in two directions. More domestic made goods are going into home consumption, while the position in overseas markets is being strengthened. In this connection it may be observed that the adverse merchandise balance on the elapsed three quarters is £27,808,000 less at £182,272,000. Price movements accounted in some measure for the higher values registered. It is nevertheless a satisfactory sign of returning health that prices continued slightly on the upgrade last month.

To sum up, Britain is steadily forging ahead and there is evidence that she is gradually regaining the position she formerly occupied in world commerce.

BRITISH INDUSTRIES FAIR, 1934.

Space Bookings.

Space bookings at the Fair are extremely satisfactory.

Already, some four months prior to the opening date, 379,381 square feet have been booked at the London Section of the Fair exclusive of space booked in the Textiles Section at the White City, which now amounts to 48,018 square feet of space actually allotted, or a total area of 427,399 square feet. Other applications for space at the White City have been received.

In comparison the total space occupied by exhibitors at the London Section of the 1933 Fair was:—

Olympia	280,146
White City (Furniture and Textiles) . .	187,944
	468,090

The furniture section which will again be housed at the White City is again the largest individual trade section of the Fair, and no less than 135,640 square feet have already been booked as compared with the total area of 98,721 square feet occupied by the section at the B.I.F., 1933.

The Birmingham Section of the Fair reports space bookings already in excess of the total area of exhibits occupied at the 1933 Fair, which were indoor area 244,362, and outdoor space approximately 50,000 square feet. Plans have been approved for a permanent exhibition building which will provide space for 500,000 square feet of actual exhibits. Work is already proceeding which will add 55,000 square feet to the indoor exhibiting space at the 1934 Fair, to accommodate exhibits of the gas, electricity, building and engineering trades.

FINANCE.

NEW COMPANIES.

Bowling Mills Combing Company, Limited.

This is a private company which has been formed for the purpose of carrying on the business of wool combers, etc. The nominal capital is £50,000 in £1 shares.

£2,000,000 *Beet Sugar Company.*

The Irish Sugar Company, the new concern which has been formed by the Free State Government to control the factories erected under the Government's beet sugar production scheme, has been registered as a public undertaking under the title of Comhluct Suicre Eireann Teoranta. The capital, as was announced by the Minister for Finance when the Enabling Bill was moved in the Dail, is £2,000,000 in £1 shares. The objects of the company are to erect and operate at least three new sugar factories and to acquire the existing Carlow concern. It is understood that the price of the acquisition for the latter, which has a capital of £400,000, will be about £450,000 exclusive of £50,000 for stocks and fittings of the factory.

Turner and Newall Subsidiaries.

As from October 1st the directors of Turner and Newall, Limited, are consolidating the manufacture and sale of asbestos cement and asbestos electrical insulation goods into one organisation, which will trade under the name of Turners Asbestos Cement Company (Branch of Turner and Newall, Limited). The consolidated organisation will have its headquarters at Trafford Park, Manchester, and works and branch offices throughout the United Kingdom. This step follows the declared policy of the company of combining into one branch of Turner and Newall, Limited, all interests of an analogous nature, and in this case four subsidiary companies—Turners Asbestos Cement, Limited, Asbestos Cement Building Products, Limited, Bell's Poilite and Everite Company, Limited, and British Fibrocement Works, Limited—will be effectively wound up. To a large extent the reorganisation has already been affected.

Liverpool Borax (1933), *Limited.*

This public company has been registered with a capital of £65,000, to acquire Liverpool Borax Company and to carry on the business of borax and soap manufacturers, etc. The directors are:—John T. Williams, Charles H. Nelson, Thomas Henderson, Horace W. Bannister, William H. Crowe and George E. Barlow. Registered office—43, Castle Street, Liverpool.

Associated Publishers, Limited.

This is a public company which has been formed with the object of carrying on business as publishers, proprietors and producers of books, magazines, newspapers, etc., and for the purpose of entering into agreements with Hutchinson Printing Trust, Limited, Hutchinson and Co. (Publishers), Limited, and John Long, Limited. The nominal capital of the company is £130,000 in £1 shares. Registered office—34, Paternoster Row, E.C. 4.

AMALGAMATIONS.

Wagon Merger.

The Sentinel Waggon Works, of Shrewsbury, manufacturers of steam road vehicles, has acquired the business of Garner Motors, Birmingham. The Garner range of light petrol vehicles will thus become complementary to the Sentinel steamer range, without in any way overlapping it or curtailing the development which it is undergoing at present.

John Lewis to take over Peter Jones.

John Lewis and Company, and Peter Jones, drapers of Oxford Street and Sloane Square, respectively, already associated, are to be amalgamated. It is proposed that John Lewis take over Peter Jones by an exchange of shares. John Lewis will increase its capital by creating 1,000,000 Five Per Cent. Cumulative Preference Shares, of which 872,044 will be issued in the first instance, and will also issue new debenture stock.

For each seven and a half per cent. preference of Peter Jones, John Lewis will give one five per cent. Preference of £1 and for each five Ordinary of Peter Jones will allot one five per cent. Preference. This will call for the issue of 132,044 shares.

The directors of John Lewis ask for powers to create securities that will provide for paying off all six per cent. debenture stock of both companies (totalling £1,400,000) and the Mortgage (£27,000)

Linoleum Merger.

Michael Nairn and Company, linoleum manufacturers, Kirkcaldy, have bought the Fife Linoleum Company's undertaking at Kirkcaldy for £75,000. The purchase of this factory is a definite step by Michael Nairn and Company, towards centralizing the production of linoleum in Kirkcaldy. This was foreshadowed recently by a circular issued to the Preference shareholders of Michael Nairn and Greenwich, Limited, offering to buy their shares at 24*s*. each. At that time Sir Michael Nairn, chairman of the concern, stated that the centralization scheme would take about two years to complete and if accomplished would mean considerable employment to Kirkcaldy workers. The Greenwich factory is mainly concerned with the production of inlaid linoleums and employs nearly 1,000 hands. The share capital of the Fife Linoleum Company is £100,000 of which £86,000 is paid up.

New Steel Company.

The working arrangement entered into between the Whitehead Iron and Steel Company and Richard Thomas and Company has been carried a stage further by the registration of a private company.

Under the arrangement the Whitehead Iron Company's mill at Tredegar is to be transferred to Scunthorpe, Lincolnshire, where one of Richard Thomas and Company's is situated.

The new company is styled the Whitehead Thomas Bar and Strip Company and has a capital of £100,000 in £1 shares—50,000 to be held by the Whitehead Iron and Steel Company and constituting Class " A ", and 50,000 to be held by Richard Thomas and Company, constituting Class " B ".

The company will acquire land at the Redbourn Works, Scunthorpe, Lincs., to establish finishing mills in all descriptions of steel products, especially in respect of steel bars and strip.

The first directors are:—Lionel D. Whitehead (first deputy chairman and managing director); Gustavus H. Lathan and Arthur G. Brown, appointed on behalf of the holders of class " A " shares, and Sir William J. Firth (first chairman), Albert W. Kieft and Chas. Phillips, appointed on behalf of the holders of class " B " shares.

New Textile Merger.

Haydock and Drake, Limited, Phoenix Mill, Pump Street, Blackburn. This is a new company which has been registered in order to take over and amalgamate the undertakings of James Haydock, Limited, and William Drake, Limited, and to carry on the business of heald, reed and comb manufacturers and dealers, yarn doublers, textile engineers, etc. The nominal capital of the company is £15,000.

Increases in Capital.

	£
British International Pictures, Ltd. . .	2,000,000
Ollivants (West Africa), Ltd. (Merchants) .	199,000
Sangers, Ltd. (Chemists)	540,000
Brintons, Ltd. (Carpet Manufacturers) .	134,500
Crepe Yarns, Ltd.	124,000
The British Bath & Enamelware Company, Ltd.	57,000

CONTRACTS SECURED.

Orders from Finland.

Messrs. Ferranti, Ltd., London, have secured an order for one 12,000 k.v.a. transformer from A. Ahlstrom O.Y., for their power line from the Vaikans sub-station to their factory. The value of the contract is £3,000.

Orders from Egypt.

Messrs. Gourock Ropework Co., Ltd., Glasgow. Impermeable flax canvas covers, £4,000.

Messrs. Metal Traders, Ltd., London. Copper ingots, £2,000.

H. J. Skelton and Co., Ltd., London. Mild steel plates, £1,350.

Messrs. British Thomson-Houston Co., Ltd., London. "Candy" filters, £4,580.

Messrs. Tangyes, Ltd., Birmingham. "Tangye" engines, £2,400.

The British Thomson-Houston Co., Ltd. Electric motors and pumps for the Fagus waterworks, £9,200.

20,000 *Tons Coal Order from Sweden.*

Details were received in Newcastle recently of the allocation of the Swedish State Railways contract for locomotive fuel. Northumberland secured 9,000 tons and Durham 11,000 tons, the balance being placed on the Continent.

Rail Supplies for China.

It is officially stated that £2,500,000 has been assigned by the Chinese Ministry for the purchase of railway supplies from Britain under the loan of $60,000,000 secured on Britain's share of the Boxer Indemnity returned to China.

Engine for West Indies.

It is announced by Sir W. G. Armstrong Whitworth and Co. that an order has been placed with them by Messrs. Henschell du Buisson and Co. for a 12-ton 95 b.h.p. Diesel-electric locomotive for use at the sugar cane plantations and works of the St. Kitts (Basse Terre) Sugar Factory, West Indies.

Telephone Contract for British Firm.

It is reported from Kovno that the Lithuanian Government has decided to entrust a British firm with the reconstruction of the telephone system, beginning with new automatic telephone stations at Kovno an Memel. A contract involving the expenditure of nearly £200,000 has already been arranged, and a detailed agreement is being drawn up.

Electrical Plant for South Africa.

The City Council of Johannesburg has accepted the offer of the British General Electric Company, Ltd., for a 10,000 kw. turbo generator and condensing plant (a duplicate of the two sets previously installed by this firm) required for the first portion of the extensions to the Jappe Street generating station at the tendered price of £26,155. According to the report of the Tramway and Lighting Committee, this is the lowest offer, and is for plant of British origin and manufacture.

Contract for Submarine Cable.

Messrs. Siemens Brothers & Co., Ltd., London, through their local office have secured a contract from the Governments of India and Ceylon for the manufacture of 35 Statute Miles of 4-conductor Telephone and Telegraph Submarine Cable. This cable is intended to be laid between India and Ceylon.

Orders from Argentina.

British Steel Piling Co. have secured an order for a semi-automatic pile driver in connection with the construction of the first section of the South Canal at Santiago del Estero.

The value of the contract is £13,000.

Morgan Crucible Co. (South America), Ltd., have been awarded an order for two oscillating petroleum ovens by the Director of the Argentine Mint.

The value of the contract is £1,000.

Sugar Factory for India.

Messrs. Duncan Stewart & Co., Ltd., have secured through their local representative an order for a new factory to be erected at Campiarganj. The factory, it is understood, is to work in the 1934-35 Season.

IRON AND STEEL.

The progress reported in recent months is steadily maintained in the United Kingdom Iron and Steel Industry and the general tendency for prices to harden would indicate that the prospects are viewed with confidence. The production of steel during September was the highest since June, 1930. The principal demand is being experienced from the Home Market. Foreign suppliers are finding it extremely difficult to secure business in the United Kingdom and imports from the Continent are on a very reduced scale.

The monthly statement of the National Federation of Iron and Steel Manufacturers shows that there were 74 furnaces in blast at the end of September, a net increase of one since the beginning of the month. The pig iron production amounted to 359,700 tons which, of course, means a slightly higher daily rate than that for August, when the output was 362,700 tons. In September last year the comparable figure was 260,400 tons. As stated above, the steel production registered a marked increase, the figure being 669,000 tons compared with 551,300 tons in August and 430,300 tons in September, 1932.

Imports. The September figure of the total importation of iron and steel material is 80,342 tons, which is only 632 tons higher than the total for August. The details, however, show marked differences in the trading of the two months, particularly in the pig iron and semi-manufactured steel. In the case of the former there is a decrease of about 10,000 tons, but the August figure was affected by heavy supplies received from India. The importation of sheet and tin plate bars, however, of 8,980 tons in September as compared with 4,168 tons in August, showed an increase of 4,812 tons.

Exports.—The official total of exports for September of all iron and steel and manufactures thereof is 157,367 tons compared with 154,682 tons in the immediately preceding month, and 127,039 tons in September, 1932. From this it is apparent that steady progress is being made and having regard to the conditions obtaining in the markets of the world the increase in the trade, though slight, gives cause for satisfaction. The returns show that increased business has been done in the following commodities—steel bars and sections, heavy plates, black plates and steel pipes. Exports of railway material remain approximately the same, but all the light hardware commodities including nails and screws, light castings, hollow-ware and tools show marked improvement. Heavy steel commodities in which decreases are recorded compared with August are strip steel, light plates, cast pipes, tin plates and galvanised sheets. Enquiry for galvanised sheets has slackened off again and makers, now that the important Argentine contract has been completed, are needing orders. The enquiry for tin plates is comparatively quiet, but prices are steadily advancing and makers are confident of the future. Current bookings by makers are reported to be practically equal to production which at the moment is approximately 65 per cent. of capacity.

It is indicative of the improved outlook in the Iron and Steel Industry that the price of scrap iron remains very firm, and it is apparent that good and suitable scrap is not easily obtainable.

The most interesting feature of the statistics of non-ferrous metals are those concerning tin. The United States of America continues to take large consignments of tin smelted in the United Kingdom and this market shows some preference for tin actually mined in Cornwall which, of course, is but a small proportion of the United Kingdom smelter output. The total exports of tin during September were 4,398 tons as compared with 4,065 tons in August and 1,111 in September 1932. The value of non-ferrous metals and manufactures exported in September was £1,455,073, which is nearly treble the value of such metals exported in the corresponding month of last year.

MACHINE TOOLS.

Messrs. B. & S. Massey, Limited, Openshaw, Manchester, are now producing a new range of " Clear Space " pneumatic power hammers in sizes from 2 to 20 cwt. The hammers are constructed on lines similar to those of the previous " Clear Space " type, with working parts totally enclosed. In the latest design there is a hollow forged steel ram in place of the claw-end piston rod characteristic of the former type. It is of one-piece construction, heat-treated, machined all over, and ground on the head and body. The anvil block, which is a separate casting in all sizes of hammer, is machined on the underside to ensure firm seating on the foundation timbers. It is octagonal in section and can therefore be set so that the pallets are at either 45 or 90 degrees to the centre line of the hammer, the stuffing box being rotated to suit.

A single casting comprises the hammer cylinder, pump cylinder and valve chest. The last-mentioned is provided with a renewable valve tube reamed to size after insertion, and the control valve is ground to fit the tube. The central mechanism has been improved, the new valve and valve gear embodying the Massey " single blow " feature, but providing even greater precision of control over both single and automatic blows. Hammers up to and including the 7-cwt. size are equipped with a foot lever in addition to the hand lever. The lower portion of the standard forms an oil sump. A pump, actuated by the crankshaft, automatically lubricates the crankshaft and connecting rod big end bearings, and by a separate pipe provided with sight feed and screw adjustment for flow, the cylinders, valve chest and small end bearing. The inlet valves are arranged to draw from within the standard the small amount of air required. Exhaust air is directed into the standard, a feature which contributes to the quiet action of the hammers.

The machine is driven by electric motor, mounted on an extension of the baseplate, or by belt from the line-shaft, through machine cut spur gearing. The cast iron pump piston is connected by a forged steel connecting rod having an adjustable big end bearing, with the forged steel crankshaft, which is pressed hydraulically into the driving wheel. With the 20-cwt. size, reduction gearing is housed within the standard, and power transmitted from the motor by Texrope.

William Asquith, Limited, High Road Well Works, Halifax, have recently booked an order for a 48-inch carriage and wagon-wheel lathe for one of the leading Indian railways. This is a sphere of manufacture which has only recently been entered by this firm, but a complete range of machines of this type has been developed to meet the requirements of modern locomotive and carriage and wagon construction and repair.

Snow and Company, Limited, Stanley Street, Sheffield, report a good demand for standard type surface-grinding machines. A number of vertical-spindle machines and openside machines are on order for home manufacturers and motor car builders. The latter machines have a capacity for work up to 6 feet long by 15 inches wide, being fitted with 14-inch dia. by 6-inch wide grinding wheels. Other recent orders include a batch of four horizontal spindle, periphery-wheel surface-grinding machines. The firm's range of table-surface grinding machines are also in good request.

Rice and Company (Leeds), Limited, Elland Road, Leeds, find a slight improvement in the demand for hydraulic plant. Recent orders include a concrete slab press of 3-ft. by 2-ft. capacity for a home firm; a 300-ton cotton baling press for Brazil; two hydraulic riveters for Spain; and a 300-ton, 5 ft. locomotive wheel press for overseas. The latter machine is of the inclined bar type in order to facilitate the insertion and removal of the work.

AUTOMOBILE AND ALLIED TRADES.

Wonderful progress of the British Motor Industry.

At the conclusion of the most successful Motor Exhibition at which the attendance was the highest since 1928, it is appropriate to record the position in which the British motor industry stands to-day, a position to which it has attained in considerably less than a decade, and during a period which has witnessed a time of almost unprecedented general world trade depression.

The condition in which the industry found itself at the conclusion of the Great War is too well known to require recapitulation; suffice it to say that at home and overseas it was in the position of having virtually to commence *de novo* to establish itself as an industry at all In all markets its competitors were firmly entrenched and its efforts were for some time harassed by prejudices against the design and construction of its products, often more fancied than real. There were not lacking many who felt and gave utterance to their opinions that the industry could hardly expect to reach a prominent position in the motor markets of the world within a space of many years, even if it ever succeeded in gaining such a position at all. Yet the industry has shown that it not only possessed the will but the ability, foresight, and enterprise to place its products in the forefront of the world markets, and within a period considerably shorter than was at one time considered possible.

There will of course be those who will ascribe this success to a measure of assistance afforded to the industry by protection in the home markets, and economic advantages in regard to rates of exchange, but while these influences have helped, the progress could not have been attained but for the efforts of the industry in successfully providing for the transport requirements of its potential customers.

Imports.

It became at once apparent, as soon as the industry was free to commence operations after the war, that before any sustained efforts could be made in the export field, an assured home market was essential, and attention was directed to this initial aspect. A sustained propaganda effort was launched and carried out so successfully that the importation of motor vehicles into the United Kingdom has fallen considerably. In 1923 the total net imports of vehicles and chassis were 27,105 units to a value of £4,098,100. In 1930 this has dropped to 11,278, value £1,827,390; in 1932 to 3,072, value £578,331, while for the eight months to the end of August, 1933, the total was 2,696 units to a value of £486,431.

Registrations.

An interesting illustration of the manner in which the home market has become virtually assured to the United Kingdom manufacturer is provided in a comparison of import and registration statistics. It has been shown that imports have fallen by well over 20,000 over a period of 10 years. During the same period the number of vehicles in use in the United Kingdom has risen from 680,156 in 1923 to 1,642,575 in 1932. For the first six months of 1933 registrations of new cars in the United Kingdom exceeded 100,000, the first occasion that this has occurred in the history of the industry. Previous to that the peak had been in 1929, but the record then was over 100 units less than the figure for 1933.

Production.

As indicating the growth of the industry, the figures of production of British motor vehicles make interesting reading. In 1907 only 12,000 vehicles were produced in the United Kingdom. In 1923 the total was 95,000; in 1930 it had risen to 236,528, and last year it had dropped slightly back, the total being 232,719. It is anticipated that 1933 private car production will show a substantial increase over 1932.

Exports.

Side by side with the progress in the Home Market, United Kingdom manufacturers have spared no effort to establish themselves in the export field, and though the task has been by no means an easy one, so thoroughly has it been undertaken that to-day the United Kingdom motor vehicle is commanding a leading position in many markets and attracting to itself a degree of interest in markets that formerly were virtually closed to it.

The progress made can best be appreciated by a study of the summary of United Kingdom exports over a period of years. In 1923 the total number of vehicles and chassis exported was 6,254 units of a value of £2,843,721. By 1931 this total has increased to 24,312 (value £4,457,853) and last year reached 40,178, value £5,446,486. During the nine months to the end of September, 1933, 36,110 units valued £4,679,956 were exported as compared with 25,298, value £3,579,400 for the same period of last year. It may thus be anticipated with some confidence that when the figures of export for the whole of 1933 are disclosed there will be apparent a satisfactory increase over the preceding year.

The method by which this has been accomplished over a comparatively short space of time and after a belated and handicapped start forms a glowing tribute to the initiative and enterprise of United Kingdom manufacturers. The real advance which the industry has secured is revealed in the official export returns, but behind the figures lies the real significance in that the improvement has, during the last year or two, been accomplished on a falling market. The United Kingdom motor industry had proved indeed the one bright spot in the general world economic difficulties of the past two years, for it, almost alone amongst the important exporting industries of the world, virtually maintained its position in the worst period of the slump and was one of the first industries to be able to make a definite advance when the time was opportune.

Meeting Overseas Requirements.

United Kingdom manufacturers were not slow to appreciate that if any real attack was to be made on overseas markets with any chance of success, it was necessary that they should secure first-hand information of the transport requirements of their potential customers overseas. Individual manufacturers and official delegations accordingly visited various Empire markets to study the problem on the spot, it being felt that their first duty was to their Empire kinsmen and that other markets could be the subject of later investigation. The Society of Motor Manufacturers and Traders, Limited, through its British Manufacturers' Section, opened branch offices in Australia, New Zealand, and South Africa, thus providing a link whereby manufacturers at home and overseas can be kept mutually in touch with the problems affecting both.

With the knowledge gained through investigation, the United Kingdom manufacturer was able to develop his vehicles in such a way as to meet the conditions obtaining in overseas markets and the requirements of his potential customers in such markets. Intensive propaganda was launched and the aid of the film was enlisted to show how eminently suitable United Kingdom motor vehicles were for every kind of transport requirement. All-British Exhibitions and Shopping Weeks were organised, particularly in Australia, New Zealand, and South Afica, and the late Sir Henry Seagrave's record-breaking car—the "Golden Arrow"—which was sent on an Empire tour formed the centre of attraction at many of the "Buy British" efforts above-mentioned.

At the same time there was launched by the industry a departure in an entirely new field—the introduction and development of the British light car, which quickly showed its ability to provide an efficient means of transport at the lowest possible cost of operation. It has provided a satisfactory answer to the requirements of the world for efficient and economic transport, a requirement that the prevailing condition of world economics has made more than ever of paramount importance.

The result of their study of conditions and requirements overseas has been incorporated in the vehicles placed on the export market, and, together with the light vehicle, has resulted in the United Kingdom industry making considerable headway in Empire markets. From all parts of the world come reports of the steady progress being made by the United Kingdom motor vehicle. In New Zealand, imports of cars and chassis from the United Kingdom during 1932 were 2,537, or 83·34 per cent. of the total car imports, as compared with a United Kingdom percentage of 71·22 in 1931 and 23·83 in 1930. Registrations of United Kingdom vehicles have risen from 22·32 per cent. in 1930 to 62·54 per cent. in 1932.

In Australia, during the first quarter of 1933, registrations of United Kingdom vehicles numbered 1,448 out of a total of 3,080 (or 47 per cent.). In Ceylon, out of some 14,000 vehicles on the road at the end of 1932, over 5,000 were of United Kingdom origin, while the figures for the new registrations there during the last quarter of 1932 show that, of 286 cars registered, 258 (or 90 per cent.) were from the United Kingdom.

The industry has also commenced a determined effort to capture the world markets outside the Empire and encouraging progress is being made. In exhibitions on the Continent and elsewhere the United Kingdom Motor vehicle has been shown and has commanded increasing interest with beneficial effects upon sales. At the recent Paris Automobile Salon the United Kingdom car proved a centre of attraction, and at British trade weeks in Copenhagen, and, more recently, at Helsingfors, the productions of the United Kingdom motor industry formed one of the principal attractions. In regard to Finland it may be mentioned, as indicating the manner in which the industry is leaving no stone unturned to expand its export field, a special delegation visited Helsingfors and other centres during the British Trade Week to consider, in collaboration with the authorities and others in that country, conditions and transport requirements. Such widespread enterprise is bound to have results, and one manufacturer reports, for example, that for the first nine months of his 1933 season, his percentage increases have risen by 40 per cent. in North Africa and West Asia; by 54 per cent. in Europe; and by 33 per cent. in the Far East.

Successes in Sport.

Coincident with the success achieved in the home and export markets, British cars have been putting up convincing performances in the field of sport, not only at home but in the Empire and on the Continent. The classic Italian 1,000 miles road race, the Mille Miglia—the fastest in the world—was the occasion this year for a notable triumph for British cars, two out of the three of one make finishing first and second in their class and carrying off the Team Prize. A British light car made the fastest time of the day and won on handicap in the Australian Grand Prix at Melbourne over a 200 miles course and against formidable competitors.

In addition, there have been, during the last twelve months, a number of pioneering and hazardous performances by United Kingdom vehicles in different parts of the world in which even second-hand United Kingdom cars have given abundant evidence of their sturdiness and trustworthy capabilities. In this connection it may be mentioned that a second-hand two-seater 8 h.p. British car this year crossed the Sahara Desert, the first car of so low an engine power to do so.

New Models.

The range of new cars recently introduced by United Kingdom manufacturers shows how thoroughly the needs of export markets have been catered for. With alternative engine power available in a number of cases, and chassis designed primarily for overseas use, no longer can the objection of underpower be raised against the British car. To meet the requirements of overseas markets, optional steering control is provided in the latest products of many manufacturers, whilst synchromesh and pre-selective gear changing are tending to revolutionise the transmission system and to make for the ease and satisfaction of the driver.

Improved chassis design, coachwork refinements, and the introduction as standard of many additional popular fittings, have gone far towards producing from the factories in the United Kingdom cars that for performance, value, running costs, second-hand value, general trustworthiness, cannot be beaten.

As with the pleasure vehicles, so has the commercial goods and passenger-carrying vehicle progressed, and the forthcoming exhibition at Olympia of these vehicles will indicate the manner in which the manufacturers of such vehicles are meeting the transport requirements of their potential customers both at home and overseas.

The United Kingdom motor industry saw the close of 1932 with justifiable feelings of satisfaction at progress made, and with an optimistic outlook as to future possibilities. That progress has been maintained and accelerated during the present year, and, as world conditions improve, there can be no doubt that the Industry, which has exported 15·6 per cent. of its total private car production, will secure an increasing share of the world trade.

SHIPBUILDING.

New construction tonnage in Great Britain and Ireland has made a steady advance since the beginning of the year. The British shipyards commenced the year with 225,497 tons under construction; by the end of the first quarter the new tonnage in hand increased to 252,401 tons; at the end of the June quarter it was 287,502 tons, and according to the statistics issued by Lloyd's Register of Shipping merchant vessels under construction at the end of September last it had reached a total of 303,762 tons. This is an increase of 16,260 tons on the work in hand in Great Britain and Ireland as compared with the figures for the previous quarter, and 65,329 tons greater than that under construction at the end of September last year.

The following are the figures for Great Britain and Ireland and for other countries at the end of September:—

	Number of Vessels.	*Gross tonnage. Tons*
Great Britain and Ireland . . .	87	303,762
Other countries	129	452,990
Total for the world .	216	756,752

The four leading countries abroad are:—

	Tons.
France	95,838
Japan	85,570
Sweden	71,440
Holland	40,862

The tonnage now under construction abroad is about 8,000 tons more than that in hand at the end of June, 1933, and this increase in the quarterly total of tonnage being built abroad is the first to be recorded since June, 1930.

Great Britain and Ireland is now building 40·1 per cent. of the total tonnage under construction throughout the world. About 57,000 tons, or 19 per cent. of the tonnage now being built in the United Kingdom is intended for registration abroad or for sale.

TEXTILES.

COTTON.

The raw cotton market in the past month has shown little confidence. Prices have varied from five to six points from day to day, but seldom in the same direction for more than two days running. There is now, however, more talk of decreased acreage in America in the coming season, coupled with promise of an expansion of credit to farmers and manufacturers; and with consumption of cotton still exceeding current production, Liverpool brokers appear to anticipate an advance in prices. This expectancy is sufficient to provoke inquiry both for yarns and piece goods, but until a more definite rise occurs it is unlikely that the inquiry will materialize into orders.

Following the lead given in the coarse end of the trade some months ago by the Lancashire Cotton Corporation, the Bolton Fine Spinners are trying to raise their prices to a remunerative level, and to prevent undercutting. Combined Egyptian Mills, Ltd., have set a good example by raising their yarns by amounts ranging from 1½*d*. to 2*d*. a lb. The result of this has been, temporarily at least, a slacking off of demand for yarns, despite occasional "weak" selling by individual firms. With the coarse and fine ends of the trade holding out for a margin of profit, there has been talk of a similar concerted action on the part of medium spinners, but hitherto no definite agreement has been reached.

On the Manchester Exchange inquiry from India has been fairly active, but the bids for the most part have been too low. Light whites and dhooties have been bought for Bombay and Calcutta, and some saries and voiles have gone to other parts. China and Hongkong remain quiet, and the Straits Settlements are not much more active. Egypt has shown an interest in fine mulls and some finishing cloths have been bought for the Near East. Dyed specialities, prints and plain cloths have been booked in fair quantities for South America. South Africa has taken satisfactory quantities of heavy goods, bleachers and poplins; the Continent has bought fine cloths and piece dyed goods, and the home demand has been moderate.

In the yarn market the higher prices for Egyptian yarns have slowed up business, but a certain amount of replacement buying has taken place. Some fair weights of medium American yarns have also been bought, but the home and export demands are considered poor.

Cotton goods exported during September were of greater value than those exported during August and during September of last year (the figures for the three months being £4,892,000; £4,618,000 and £4,753,000 respectively). Grey goods increased by some 10 million square yards over August, and by nearly 7 million square yards over September, 1932. Otherwise there was little change, apart from a decline in bleached goods from September last year, of just over 17,000,000 square yards, as a result of smaller exports to India. Total exports of piece goods were 14,044,000 square yards more than in August and about the same amount less than in September, 1932. Grey yarns once more show an increase of close on a million lbs., while dyed and bleached yarns have decreased slightly. The figures are as follows:—

Yarns.	*September, 1933.* *1,000 lbs.*	*August, 1933.* *1,000 lbs.*	*September, 1932.* *1,000 lbs.*
Grey	10,594	9,894	8,878
Bleached and dyed	1,090	1,139	1,091
Yarns total	11,684	11,033	9,969

Piece Goods.	*September, 1933. 1,000 sq. yds.*	*August, 1933. 1,000 sq. yds.*	*September, 1932. 1,000 sq. yds.*
Grey . . .	35,744	25,613	28,949
Bleached . .	16,327	44,056	63,311
Printed . . .	31,248	31,477	34,118
Piece-dyed . .	42,769	40,843	42,536
Yarn-dyed . . .	6,920	6,977	8,474
Piece goods total .	163,008	148,965	177,421

WOOL.

The following table shows the steady increase which has taken place between April and August this year in the export of the chief semi-manufactures and wool textile fabrics:—

	Tops. Centals 100 lbs.	*Worsted Yarns. lbs.*	*Woollen and Worsted Tissues. Square yards.*
January . .	32,730	2,255,500	8,384,200
February . .	42,346	2,466,300	8,486,800
March . .	42,531	2,517,200	7,887,600
April . .	30,048	2,274,800	5,544,400
May . . .	35,537	2,625,900	6,115,900
June . . .	38,022	2,774,700	6,626,700
July . . .	42,624	3,527,300	8,912,400
August . .	37,216	3,891,800	10,489,900
September .	37,273	3,436,300	8,576,100

The nine months total—January-September, 1933—compared with the corresponding periods of the two previous years are as follows:—

Wool tops.—199,721 centals of 100 lbs. (1931); 283,127 (1932); 337,349 (1933).

Worsted yarns.—20,919,100 lbs. (1931); 23,568,600 (1932); 25,736,000 (1933).

Woollen and worsted tissues.—65,554,300 sq. yds. (1931); 62,942,900 (1932); 70,934,700 (1933).

The value of wool textile exports, which include some smaller headings not shown above, but exclude carpets, was £18,447,206 in the first nine months of 1931 and £18,038,873 during January-September, 1933.

Germany increased her imports of wool tops from the United Kingdom from 33,553 centals of 100 lbs. in the first nine months of 1931 to 90,085 centals up to the end of September this year. Sweden, Denmark and Poland also show considerable increases, while more than twice the quantity of wool tops have been exported to "other countries" than two years ago.

There has been a very heavy fall in the export of woollen and worsted yarns to China, but perhaps the most interesting feature in the yarn exports is the increased quantity sent to the unnamed countries grouped under "other countries" during the past two years. Worsted yarns have increased from 2,778,000 lbs. in 1931 to 6,439,600 lbs. this year and woollen yarns from 1,647,900 lbs. in the first nine months of 1931 to 3,810,900 lbs. to date this year. Almost exactly 50 per cent. of the alpaca, mohair and cashmere yarns exported from the United Kingdom went to Germany.

The export of flannel piece goods shows an increase this year over the corresponding periods of 1931 and 1932, but fewer mohair and alpaca tissues and furnishing fabrics have been exported. In the bulk trade, however—woollen and worsted piece goods—there has been a large increase, as shown above. An outstanding feature in the export of woollen tissues is the increased quantity sent to Denmark:—803,500 sq. yds. during January-September, 1931; 1,145,100 sq. yds. (1932) and 2,406,000 sq. yds. this year.

South Africa, the United States of America and Egypt also show large increases in woollens from the United Kingdom and exports to Australia, New Zealand and Argentina have improved. Heavy declines, however, are recorded by Canada, Germany, China and Japan.

Denmark's imports of worsted tissues from the United Kingdom have risen from 1,058,000 sq. yds. in the first nine months of 1931 to 1,655,900 sq. yds. up to the end of September this year. France, Egypt, Japan, Argentina, South Africa and India also show substantial increases in worsteds, while considerably less has been exported to China, Germany and Greece.

LINEN.

The first Irish flax market of the season was held on the 26th September. The flax was of medium quality and prices ranged from 7*s.* to 8*s.* 3*d.* per stone. It is expected that regular markets will be held by the end of October.

The yarn market was rather quiet. Exports of yarns during September, 1933, were valued at £41,243 as compared with £33,983 in September, 1932, and £31,855 in September, 1931.

Exports of piece goods during September more than maintained their upward tendency, reaching the value of £341,868 as compared with £296,620 in August. For September, 1932, and 1931, the comparable figures were £185,543 and £223,745 respectively.

Exports of piece goods to the United States of America continued to improve, reaching the value, unexampled for many months, of £143,103, a great increase over the values exported in September, 1932, and 1931, of £71,230 and £83,346 respectively. Other important markets, namely Brazil, Australia, Canada, China and South Africa, also showed considerable increases. A gratifying feature is the favourable showing of Empire countries in the returns, all of them (except India) having increased their imports of linen piece goods by 50 per cent. or more in the month.

Exports of damask table linen were still rising. For the month of September, 1933, their value was £76,192 as compared with £66,479 in September, 1932, and £60,253 in September, 1931.

The total values of linen goods exported from the United Kingdom during September, 1933, 1932 and 1931 were respectively £574,010, £373,914 and £421,983.

Total exports of linen goods from the United Kingdom during the nine months ended 30th September, 1931, 1932 and 1933 were respectively £3,914,457, £3,839,592 and £4,159,320. The quantities of linen piece goods exported during the same periods were 46,896,000, 49,039,400 and 58,168,200 square yards.

Imports of linen goods into the United Kingdom during September, 1933, were £14,553 in value as compared with £34,583 and £58,592 in September, 1932 and 1931 respectively.

POTTERY AND GLASSWARE.

During the past few weeks there has been a distinct improvement in trade conditions in the "Potteries", particularly so far as the tile, sanitary ware and general earthenware sections are concerned. There is every indication that the demand to meet the Christmas seasonal home trade requirements will exceed that experienced during the past few years, and an upward tendency is noticeable also in the export trade.

Following the increased value of pottery exports during August referred to in the last issue of the "Commercial Bulletin" it is gratifying to note that the value of the exports of pottery during September was £246,015 compared with £210,907 for the corresponding month of 1932, an increase of £35,108 or 16·6 per cent. The increased exports were mainly in those sections producing sanitary ware and general earthenware.

Following are details of the total quantity and value of the exports of pottery of all classes (excluding bricks) for the first nine months of this year, with comparative figures for the two preceding years:

	Quantity. cwts.	*Value.* £
January-September, 1933 . .	1,828,236	2,066,707
,, ,, 1932 . .	1,865,575	2,202,162
,, ,, 1931 . .	2,614,715	2,563,682

The following statement gives details for each section of the industry:—

Section.	*Value of Exports.* *1933.* £	 *1932.* £	*Decrease.* £	*Percentage of decrease 1933 compared with 1932.*
Tiles (all classes) .	142,967	119,211	6,244	4·2
Sanitary ware .	432,373	425,978	6,395 (Inc.)	1·5(Inc.)
Chinaware . .	152,157	168,675	16,218	9·6
Electrical porcelain	15,085	80,119	35,064	13·7
General earthenware . . .	1,055,974	1,100,452	14,478	4·0
Stoneware . .	17,029	21,805	7,776	31·1
Refractory goods and clay products not elsewhere specified .	220,822	252,892	33,070	12·7
Total .	2,066,707	2,202,162	135,455	6·2

The percentage decrease at the end of September (6·2 per cent.) compares favourably with that recorded at the end of June, 1933, when it was 9·7 per cent.

Following are figures of the value of exports of glass and glassware during the first nine months of this year, with comparative figures for the two preceding years:—

		£
January-September,	1933	922,766
,, ,,	1932	937,250
,, ,,	1931	1,034,591

Conditions in the glassware industry continue quietly steady, but with a gradually increasing production to meet home trade requirements of British glassware to take the place of ware previously imported.

MOULDED PRODUCTS.

The manufacture of moulded products and the synthetic resin industry are becoming of considerable importance in many countries. The manufacture of these products was initiated mainly by American and German concerns and it is not generally appreciated abroad that the United Kingdom is now further advanced in the industrial application of plastic materials than any other country. In the last seven years the industry in the United Kingdom has completely revolutionised the manufacture of moulded products and to-day the technique and equipment available is second to none. The synthetic resin industry is without doubt only at the beginning of great developments. Plants are being erected in all parts of the world and, in view of the present developments in the United Kingdom, firms abroad wishing to obtain technical advice or install plant would be well advised to come to the United Kingdom. There is no better source of supply for machinery for the production of the following:—

Phenol-Formaldehyde Resins and Moulding Powders.

Urea Resins and Moulding Powders.

Cresol Resins and Low Grade Moulding Powders.

Synthetic Resins for lacquers and varnishes.

Acetate Moulding Powders.

Ebonite and Ebonite Dust.

Special processes have also been devised for the production of the chemicals required, such as formaldehyde, hexamethylenetetramine, paraformaldehyde, synthetic phenol, as well as for the distillation of alcohol and solvent recovery.

The necessary moulding equipment and extrusion machinery is also readily obtainable in the United Kingdom, while the British chemical industry is well organised for the supply of the raw materials used in the "Plastic" industry.

PORTABLE ELECTRIC LAMPS.

Portable electric lamps have been coming into more extensive use generally in the last few years. Messrs. Salora Lights, Limited, 53, Guildhall Buildings, Birmingham, after intensive research, have placed on the market a range of portable electric searchlights and table lamps. The lamps are operated either from accumulators or dry batteries and largely on account of their superior qualities are finding a ready sale.

The "Salora" searchlight comprises a lamp, about the size of a motor-cycle head light, with an efficient reflector and special bulb. An extension of the lamp serves as a convenient hand grip. A heavy cab tyre sheath cable connects the lamp to the battery which is contained in a rigid leather case. The batteries are of the non-spillable variety and may be either of the nickel-iron or lead type. A carrier strap is supplied so that the outfit can be slung over the shoulder; in a convenient position a two-way switch is placed which gives a choice of a dim, medium, or bright light. A focussing arrangement on the lamp permits of a spreading light of 40 yards radius at 100 yards, or a narrow beam providing a 12 inches spot at 150 yards. A lamp suitable for direct connection to any electric supply is also supplied.

These portable searchlights are being used by City Engineering and Sewer Departments; Electric Power Companies; Gas Companies; Railway Companies; Water Departments; Shipping Companies; in Oil Tankers, and for any illumination where either a powerful beam or a floodlight is required with the handiness of a portable light.

In addition to the searchlight the firm have developed a table lamp which is intended to replace oil lamps for house-hold illumination. The battery is contained in the base, and is readily removable for charging. The bulb is fixed in a lampholder with a shade carrier, so that artistic shades can be readily mounted. A two-way switch giving dim, medium, and bright illumination is also fitted on this lamp. The battery gives 18 hours' full light on one charge of the accumulator.

The lamp is entirely self-contained and is absolutely safe, even if left with children. It should have an extensive sale in any district where the battery can be readily recharged either from an electric supply or a motor car. One type is also supplied with a dry battery instead of the accumulator.

Another of the firm's products is the " Clee " self-contained hurricane lamp. This also has an unspillable accumulator and a two-way switch giving three intensities of illumination.

Further particulars regarding the lamps can be obtained from the manufacturers.

AVIATION.

NEW BRITISH TRANSPORT 'PLANES.

Recognition of the aeroplane as a real commercial vehicle, able to operate profitably over many routes in direct, unsubsidized competition with surface transport, is a leading event in British aviation during 1933. For the first time air lines inside the United Kingdom itself—despite the short distances and highly developed railways—have operated regularly through the summer with a fair measure of success. Next year the flying machine should be plying regularly over nearly double the number of routes inaugurated this year.

The new development has given marked impetus to the design and construction of " economic " commercial craft which are efficient and inexpensive in first cost and upkeep. Mr. Edward Hillman, whose aeroplanes operate daily services between London and the Continent, deserves much of the credit; he was first to reduce fares charged for passenger-carrying by air to a level approaching those charged for surface travel and his conception of the kind of aeroplane which would best meet his requirements led directly to the building of one of the most successful of all small air transport 'planes—the de Havilland " Dragon ".

Up to the beginning of October this year no fewer than fifty-eight of these efficient and economical twin-engined 260 h.p. biplanes had been sold to buyers in the

United Kingdom and abroad, though the first machine of the type did not take the air till late in 1932. Low in first cost—£2,800—the " Dragon " is remarkable in the amount of pay-load which it can carry and in low maintenance charges. Its " Gipsy Major " engines, located in stream-lined nacelles on the lower wings, are probably the most dependable power units of their class and power in the world; recently the de Havilland company have been able to guarantee that every " Gipsy Major " engine, given proper routine attention, will run 750 hours between overhauls. This is a world record, and a very notable one. It means that, practically speaking, engine failure is eliminated, and that engine maintenance is extraordinarily cheap.

To economy and trustworthiness the " Dragon " adds real flying efficiency. Its normal cruising speed is 110 miles an hour, and maximum attainable speed rather better than 130. On the power of either motor it will fly level with ease, even with full load on board, implying a margin of safety which is not without interest to the operators and users of commercial aeroplanes. Its cabin is roomy, relatively quiet and well-lit.

Another light transport craft which has done well during the year is the Spartan " Cruiser ", a three-engined monoplane with similar carrying capacity to the " Dragon ", but capable of eight to ten miles an hour more speed. A third is the well-tried Westland " Wessex ", which may, perhaps, be considered the pioneer of the multi-engined light United Kingdom transports that are flying to-day; employed for the past four years in the fleet of Imperial Airways and of S.A.B.E.N.A., the Belgian air transport company, the " Wessex " is still doing good work and has been flown to advantage on two of the new United Kingdom internal airways.

New United Kingdom machines designed to meet the needs of airline operators in the United Kingdom and overseas are taking the air in quick succession. Two of them, widely divergent in type but each marked by the typical British insistence on real efficiency without frills, call for immediate attention. The first, now going through trials at a London aerodrome, is a small cabin monoplane fitted for the carriage of five passengers on exceptionally small power expenditure; the second is a large machine designed to transport sixteen passengers and a crew of two.

Fine outward vision for pilot and passengers and ample safety margin are notable in the design of the small machine, which represents the second recent effort in land-plane construction of the Short Company, famous the world over as the builders of large flying boats. But the pay-load in proportion to horse-power is the most impressive feature of the craft; approximately a thousand pounds of load are carried on the power of two 75/85 h.p. Pobjoy air-cooled radial engines, equivalent to nearly six pounds per horse-power at maximum power output.

At considerably less than normal engine speed the craft cruises at 93 miles an hour. Maximum level speed is at least 114 m.p.h. Its landing speed is only 45 m.p.h., and its normal still-air range is 350 miles. Access to, and egress from, the cabin is more than usually easy. Framework of fuselage and wings consists entirely of metal. Delivery of the first production model of this interesting small aeroplane, which seems well worth the investigation of the operator of air-taxi services or " feeder " air lines, will begin next spring.

The larger of the two machines is the latest and largest in the line of Avro multi-engined transport 'planes, deriving from the Avro " Five ", Avro " Six " and Avro " Ten " trimotored monoplanes which have been flying with considerable success over certain Dominions and colonial airlines during the past four years. Unlike its predecessors, the Avro " Eighteen " is twin-engined, taking power from two 400 h.p. Siddeley " Jaguar " motors. Alternatively, four Siddeley 240 h.p. " Lynx " motors may be installed. Its cruising speed is expected to be an easy 125 miles an hour, a high figure which must largely be credited to the clean design and fine streamlining of the wings and body. Townend resistance reducing rings encowl the radial engines and every detail, down to the shape of the smallest external part, has been studied to avoid impairing the aerodynamical efficiency of the structure.

Many other machines are taking shape in the workshops and on the drawing boards. The United Kingdom industry will be admirably represented next year in every class of commercial aeroplane, from the high-speed mail carrier to the small " feeder " line and " special charter " aeroplane. And every machine will be a practical vehicle, reasonable in first cost and given intelligent management and control, a source of profit to the operator.

CATALOGUE LIBRARY.

The undermentioned catalogues relating to United Kingdom manufacturers have recently been received and may be consulted by *bonâ fide* firms or individuals at the Office of His Majesty's Senior Trade Commissioner in India, Fairlie House, Fairlie Place, Calcutta.

Names and Addresses.	*Description.*
James Arnott & Sons, Ltd., Arnoco House, Quayside, Newcastle-upon-Tyne.	"Arnoco" Lubricating Oils.
* J. B. Bennett & Sons, Ltd., 156, Buchanan Street & 50, West George Street, Glasgow.	Etchings, Engravings & Drawings by old and modern Masters.
The British Drug Houses, Ltd., London.	Medical Products.
The Daimler Co., Ltd., Coventry.	Daimler Fluid Flywheel Transmission.
Lewis C. Grant, Dunniker Foundry, Kirkcaldy, Scotland.	Rice Mill Machinery.
G. A. Harvey & Co., (London) Ltd., Woolwich Road, London, S.E. 7.	Perforated Metals; Sheet Metal & Sheet Plate Work; Woven Wire & Wirework; Castings; Zinc and Copper Work; Industrial Plant; Steel Furniture & Equipment for Offices and Works.

* The catalogue marked with an asterisk has also been received in the Office of His Majesty's Trade Commissioner, 3, Wittet Road, Ballard Estate, Bombay, where it may also be consulted by *bonâ fide* firms or individuals.

In addition, His Majesty's Trade Commissioner, Bombay, has recently received the undermentioned catalogues:—

Names and Addresses.	*Description.*
Flexotube (Liverpool), Ltd., 2, Strand Street, Liverpool.	Mechanical Sealing Machines.
Petters, Ltd., Yeovil.	Diesel Marine Oil Engines.

TRADE ENQUIRIES.

The names of the United Kingdom firms referred to in the enquiries mentioned below will be furnished to reputable firms on application to His Majesty's Senior Trade Commissioner, Post Box No. 683, Fairlie House, Fairlie Place, Calcutta.

No. 913-33.

A United Kingdom manufacturer of Concentrated Essences and Aromatic Base products for perfumery manufacture, etc., is desirous of appointing agents for India.

No. 942-33.

A United Kingdom firm of oil refiners is desirous of appointing an agent to undertake their representation for the sale of lubricating oils of all descriptions.

No. 958-33.

A United Kingdom firm is desirous of appointing an Agent to undertake the sale throughout India of Electrical High Tension Switch Gear, manufactured by one of its subsidiary companies.

MGIPC—L—352HMTC—27-11-33 —1,050.

H. M. TRADE COMMISSIONERS IN INDIA.

Calcutta—

Sir Thomas M. Ainscough, C.B.E.,

His Majesty's Senior Trade Commissioner in India and Ceylon.

Mr. R. B. Willmot,

His Majesty's Trade Commissioner at Calcutta.

Post Box No. 683, Fairlie House, Fairlie Place.

Telegraphic Address.—" Tradcom, Calcutta."

Telephone No.—" Calcutta 1042."

Bombay—

Mr. W. D. M. Clarke,

His Majesty's Trade Commissioner at Bombay.

Post Box No. 815, 3, Wittet Road, Ballard Estate.

Telegraphic Address.—" Tradcom, Bombay."

Telephone No.—" Bombay 23025."

Ceylon—

Imperial Trade Correspondent,

The Principal Collector of Customs, Colombo.

With Compliments.

DECEMBER 1933

The
Commercial Bulletin

A Monthly Review of Official and other
announcements relating particularly
to British Export Trade

Issued by
HIS MAJESTY'S SENIOR TRADE COMMISSIONER
IN INDIA AND CEYLON.

FAIRLIE HOUSE,
FAIRLIE PLACE,
CALCUTTA.

CONTENTS.

	PAGE.
GENERAL	1
FINANCE	2
CONTRACTS SECURED	4
IRON AND STEEL	5
ELECTRO-MEDICAL APPARATUS	10
AUTOMOBILE AND ALLIED TRADES	11
THE DYSON "DRIKOLD" TRAILER	14
SHIPBUILDING	16
TEXTILES	17
POTTERY AND GLASSWARE	20
PAPER	21
AVIATION	22
CATALOGUE LIBRARY	25
TRADE ENQUIRIES	26

GENERAL.

The trade revival of the past few months continues to be reflected in the October returns. A steady increase in exports, coupled with materially heavier imports of raw materials, is again apparent.

The imports of raw materials were higher in October than they have been for many months and exceeded in value those of October, 1932, by over £3,000,000. This is highly significant, for it implies that manufacturers are more confident of the future.

The trade figures for the first 10 months of 1933 compared with those for last year, show that, despite September's heavy imports, the adverse balance has been reduced by over £31,000,000. The figures for the two 10 month periods are as follows:—

	1933.	1932.
	£	£
Imports	549,424,339	580,964,006
Exports	302,527,210	301,547,625
Re-exports . . .	41,576,527	42,720,686
Adverse balance . .	205,320,602	236,695,695

The figures relating to the export of United Kingdom goods, which have been rising since April, were in October £34,130,986 compared with £32,226,287 in September and £30,440,149 in October, 1932. October exports are thus nearly £3,700,000 higher than a year ago.

Of this increase £3,398,821 is due to larger exportation of articles wholly or partially manufactured in the United Kingdom. Out of the 20 categories in the classification only five show decreases. The increases were in the following trades:—

> Iron and steel; non-ferrous metals; wool and worsted yarns; cotton yarns; other textiles; vehicles; machinery, chemicals, drugs, dyes; leather manufactures; cutlery; hardware, tools; paper, cardboard; apparel; rubber; coke and fuel.

The value of raw materials exported during the 10 months of 1933 shows an increase of £2,380,854. The largest increase was in raw wool, the value of which rose by £1,672,043.

The chief increases in exports of raw materials during October compared with the corresponding month of last year were, coal £239,516 and raw wool £170,914. The total increase in the value of exports of raw materials was £447,004.

Of an increase of £482,902 in exports of non-ferrous metals no less than £455,985 was due to the American demand for tin.

The expansion in iron and steel exports was largely the result of increased purchases by Japan, China, France, United States, South Africa, India and Australia.

A further substantial increase in the number of employed persons is also revealed in the October figures.

On 23rd October there were at work 44,000 more than on 25th September, 640,000 more than on 25th January and 537,000 more than in October, 1932.

The number of persons registered as unemployed was 37,974 fewer than a month previously, and 448,252 less than on the corresponding date last year. On 23rd October there were approximately 9,925,000 insured persons aged 16 to 64 in employment in the United Kingdom.

There was a further improvement in employment in coal-mining, general engineering, motor vehicle and metal goods manufacture, and in the cotton, wool, hosiery, pottery, and boot and shoe industries. Conditions also began to improve in ship-building and ship-repairing, textile bleaching, dyeing and finishing, and in the tailoring industry.

FINANCE.

NEW COMPANIES.

New £7,295,000 Flour Company.

A new company to acquire the assets of Joseph Rank, Ltd., flour millers, was registered on 17th November under the title Ranks Ltd. The capital is £7,295,000. The company is to carry on the business of an investment company, in particular to acquire not less than 90 per cent. of the issued share capital of Joseph Rank, Ltd., and is to enter into an agreement with Mr. J. Rank and several others. The directors are: Joseph Rank, Jas. V. Rank, Joseph A. Rank and Sidney B. Askew.

Mr. Joseph Rank is permanent director and chairman. The registered office is at 107, Leadenhall Street, E.C. 3.

Whisky Trade.

Six distilling companies have been registered in Edinburgh as private companies, each with a capital of £100 in £1 shares. The objects are to carry on the business of distillers, blenders and exporters of Scotch whisky and other spirits, wine and spirit merchants, etc. The companies are:—James Black and Son, Ltd., Stuart Robertson and Co., Ltd., Gordon Campbell and Co., Ltd., George Dunlop and Co., Ltd., Malcolm Scott and Co., Ltd., Robertson and Cameron Ltd. The directors are Ernest Rogers Millington, accountant, and Alfred Thrussell, 25, Dunlop Street, Glasgow, mercantile clerk.

Kartles, Ltd.

This has been registered as a private company to acquire the goodwill of the business carried on by Vitalac, Ltd. (in liquidation) and the trade mark "Kartle"; to carry on the business of manufacturers of and dealers in containers, etc. Nominal capital £75,000.

AMALGAMATION.

Maple and Co.

Mr. David Longden, managing director of H. H. Martyn and Co., of Cheltenham, has joined the Board of Maple and Co., following an amalgamation of the two companies. H. H. Martyn and Co., Ltd., will remain under the same management as before, with Mr. David Longden as managing director. H. H. Martyn and Co., Ltd., carries on the business of architectural decoration, sculpture and metal work at Sunningend Works, Cheltenham. Established in 1874, the undertaking was incorporated as a limited company in 1900.

Increases in Capital.

	£
John Lewis and Company, Ltd. (Drapers) .	1,000,000
Joseph Lucas Ltd. (Cycle and Motor Accessories Manufacturers)	1,200,000
Richard Garrett Engineering Works, Ltd. .	75,000
Northern Aluminium Company, Ltd. .	100,000
Cochranes (Middlesbro'), Ltd. (Iron and Coal Masters)	199,900

CONTRACTS SECURED.

25,000 Tons Coal Order from Sweden.

Guéret, Llewellyn and Merrett, Ltd., have come to an arrangement with the Swedish State Railways under which they will supply 25,000 tons of locomotive fuel, the c.i.f. value of which is approximately £40,000, against 30,000 tons of timber from Sweden.

Big Coal Orders for South Wales.

News has been received from Cardiff that the Portuguese State Railways have placed an order for 275,000 tons of coal with three Cardiff coal-exporting firms for delivery over next year.

Durham Coal for Genoa and Danzig.

It is reported in Newcastle that:—

(*a*) The Genoa municipal gas works have purchased 30,000 tons of Durham gas coals, to be shipped in five cargoes between December and February.

(*b*) The Danzig gas works has negotiated for the supply of 10,000 tons of Durham coal.

Big Order for British Teleprinters.

Creed and Co., of Croydon, have received an order from the Union of South Africa Post Office for over 200 teleprinters. These machines are for use on the South African Post Office telegraph channels and for the promotion of a point-to-point service for stockbrokers and other commercial users in the Union.

Order from Egypt.

Glenfield and Kennedy, of Kilmarnock, and Sir William Arrol & Co., of Glasgow, have been awarded a contract to supply sluice-gates and steelwork for the Gebel Awlia dam, the value of which is given as being £125,000.

Hawker Aircraft.

Among other foreign contracts, the Hawker Aircraft Company has now received an order from the Portuguese Government.

This order for the supply of a number of high-speed fighters marks a fresh triumph for the British aircraft industry in the face of severe foreign competition. The aeroplane concerned is the Hawker " Fury " Single-Seater biplane.

Power will be derived from supercharged Rolls-Royce " Kestrel " 525 h.p. motors.

Electrical Order for the United Kingdom.

It is announced that the Johannesburg Municipality have ordered from the General Electric Co., Ltd., a 10,000 kw. high-pressure turbo-alternator, together with the necessary condensing plant. The order has been obtained in the face of severe competition from many other countries.

Cantonese Orders for the United Kingdom.

It is announced that Mr. Harold Briggs, of Oldham, formerly manager of Belgrave Mills, Oldham, vice-president of the Northrop Loom Users' Association, has been appointed on a two-year contract as technical adviser to the Cantonese Government in connexion with the erection of new cotton mills in the Canton area.

The first mill under the scheme is already in course of erection, and the machinery for it, which is being made by Platt Bros., Limited, of Oldham, is to be sent out in the spring of next year. The mill will be for spinning and doubling of yarn, and also for weaving. As it is intended to make use of electricity as the motive power, a large quantity of electrical machinery is also required, and orders have, it is understood, been placed with a firm in the Midlands. Platt Bros. state that orders have also been placed with them for the equipment of another cotton mill, and also a woollen mill.

IRON AND STEEL.

Production.

The activities of the iron and steel industries of the United Kingdom continue to expand satisfactorily. The National Federation of Iron and Steel Manufacturers report that there were 74 blast furnaces working at the end of October, which was the same number as at the beginning of the month, two furnaces having been blown in and two having ceased operations in the period. The production of pig iron amounted to 373,300 tons, compared with 359,700 tons in September and 275,600 tons in October, 1932. Of this figure 175,400 tons consists of basic pig iron for steel making, but it is understood that supplies are still short and that two more blast furnaces are to be lighted up immediately for this quality iron, which will increase the weekly output in the Cleveland area by about 5,000 tons.

The Federation's figure for the production of steel ingots and castings in October is 668,300 tons, compared with 669,000 tons in September and 439.800 tons in October, 1932. It is understood that the raw steel output is hardly sufficient to meet requirements and that more steel furnaces are being prepared for work.

The following table shows the average monthly production of pig iron and steel ingots and castings in 1913, 1920, 1930-1932, and the production in each month since October, 1932:—

	Pig Iron. *Tons.*	*Steel Ingots and Castings.* *Tons.*
1913—Monthly average	855,000	638,600
1920 ,, ,,	669,500	755,600
1930 ,, ,,	516,000	610,500
1931 ,, ,,	314,400	433,500
1932 ,, ,,	297,800	438,100
1932—October	275,600	439,800
November	267,700	173,800
December	284,500	430,400
1933—January	286,600	414,400
February	270,800	482,700
March	332,200	577,700
April	324,700	509,600
May	339,900	599,600
June	345,600	568,800
July	343,900	567,500
August	362,700	551,300
September	359,700	669,000
October	373,300	668,300

Imports.

The imports of iron and steel material in October amounted to a total of 88,854 tons, a figure slightly higher than that for the immediately preceding month. In

October, 1932, 163,190 tons were imported. More than half of the imported iron and steel consists of raw or semi-manufactured material.

Exports.

While the export trade in the commodities in question is less animated than the home trade, the export figures are, in all the circumstances, satisfactory. Official returns for October give the total exportation of iron and steel material as 193,613 tons, which compares with 157,367 tons last month, and 160,430 tons in October, 1932. The principal item contributing to the rise is to be found under the heading of galvanised sheets, the exports of which were 41,151 tons, but this figure is abnormally large since it includes 20,896 tons, mainly supplied against the locust barrier contract, destined for the Argentine Republic. Apart from this item the demand for galvanised sheets abroad has remained very quiet, and the ten months' aggregate of 228,365 tons is less than the aggregate (239,686 tons) for last year.

Other items which have contributed to the improvement in the October figures include heavy plates, which show an increase of approximately 2,000 tons, and cast pipes, the exports of which at 9,081 tons are rather more than 2,000 tons in excess of the September shipments. Both cast pipes and wrought tubes have materially contributed to the heavier export trade recorded this year. The exports during the ten months of the year of cast pipes at 67,876 tons exceeded by over 12,000 tons those of the corresponding period of 1932. In the case of tubes, the total of 156,857 tons is over 36,000 tons greater than the corresponding figure last year.

The exports of tinplates were maintained at a fair monthly level, namely 37,046 tons. Enquiries are not so heavy as could be hoped and there is a possibility that the devaluation of the American dollar will lead to increased competition from the U.S.A.

SHEFFIELD STEEL.

By a Special Correspondent.

Numerous industries are carried on in Sheffield, but the immediate association which springs to one's mind when the name of that town is mentioned is cutlery and steel. While the whole world knows that Sheffield is the origin and the home of the cutlery trade—in old books and documents reference is made to Sheffield's cutlery trade in the fourteenth century—it is perhaps not so well known that it was in this town, in the year 1740, that high grade crucible steel was first produced.

With the discovery of manganese steel, also a product of Sheffield, the town furnished another important link in the chain of development of the world's steel industry. As the need for steels with special qualities arose Sheffield produced a whole series of steel alloys now extensively used—nickel steel, chromium steel, tungsten steel, etc.—and it also gave the world that important discovery, stainless steel, the possibilities of which have not yet been fully exploited. Mr. C. M. Schwab, President of the American Iron and Steel Institute, has paid the United Kingdom the tribute of saying that there has not been a great process in iron and steel, either in America or any other country, that did not have its origin here. Sheffield may well take to itself no mean proportion of that praise.

The post-war period has not been an easy one for the United Kingdom steel industry. Continental producers, with the advantage of low taxation, low wages, and other factors which made steel production in their countries far cheaper than in England, dumped their goods in the United Kingdom at prices which made it almost impossible for the United Kingdom producers to hold their own. To improve their position they combined forces. Competing units were amalgamated, economies were introduced at every possible point, export trade in certain classes of goods was gradually centralised, and when the handicap of unfair foreign competition was checked by the introduction of customs tariffs in the United Kingdom a new era began.

Such has been the gradual improvement that Sheffield to-day is producing a greater tonnage of steel than it did in pre-war days. At present the town's output is 27,000 tons a month more than it was at the same period last year. The United Kingdom steel industry as a whole has improved to such an extent that the average monthly output in 1933 has been nearly 100,000 tons greater than the average monthly output for the whole of 1932, the figures for the month of September alone being 53 per cent. higher than in the corresponding month of the previous year. It is of interest to note that the United Kingdom steel industry is working at approximately 65 per cent. of capacity, while the International Steel Cartel, embracing the steel industries of France, Germany, Belgium, Luxemburg and the Saar, is working 60 per cent. and that of the United States of America 40 per cent. of capacity. Many United Kingdom steel firms are working at full pressure, and several new and large furnaces have recently been started in various parts of the country. One well-known steel smelting firm of Sheffield, possessing one of the largest and most up-to-date plants in Europe, last May set a world record for the output of a single furnace by producing 2,610 tons of steel in one week and over 10,000 tons in a month. This fine record was broken in September by the same firm, when in one week two of its furnaces produced 8,575 tons of steel.

No single article of steel could be mentioned which Sheffield does not produce, from razor blades to the world's largest hydraulic armour plate bending press, capable of a pressure of 12,000 tons. Rolling mills, blast furnaces, machinery for mines and quarries, railway and ships' requirements, machine tools and every other imaginable article of steel are all produced in Sheffield, and if it bears the stamp of a reputable Sheffield firm it is unbeatable in quality. Of sheep-shearing machinery used throughout the world it is estimated that 75 per cent. comes from Sheffield. Among recent productions should be mentioned a locomotive weigh-bridge, built by a well-known Sheffield firm for the Indian State Railways, the construction of which necessitated a high degree of precision. Apart from ascertaining the total weight of a locomotive, the weighbridge also registers the exact distribution of the suspended weight, so that the desired proportion comes on each wheel, thus permitting exact spring-load adjustment. Self-indicating dials mounted alongside the weighbridge give an instant record of the separate weights.

Steelworks reconstruction.

The English Steel Corporation has announced that it has decided to spend about £500,000 immediately in reorganizing and bringing up to date the Vickers works at Sheffield. At these works there is the largest drop stamping plant in the United Kingdom, and the money is to be expended chiefly on that department and on the extension of facilities for the heat treatment of special steels. Provision is also made for the installation of another open hearth furnace in their new steel melting house, thus completing a battery of four 60-ton furnaces.

ELECTRO-MEDICAL APPARATUS.

THE "BECO" UNIVERSAL CAUTERY AND LAMP UNIT.

The development of electro-medical apparatus has been retarded in the past by reason of the multiplicity of working voltages encountered in electrical supply systems, some of which supply direct current whilst others supply alternating current. An instrument which is capable of satisfactory operation when connected to *any* source of electrical supply is, therefore, likely to appeal to users.

The "Beco" Universal Cautery and Lamp Unit is an instrument of this kind, and is of particular interest to physicians and surgeons. It incorporates a circuit indicator by means of which the practitioner can tell immediately whether the electrical supply is direct or alternating. A voltage selector switch is then adjusted to the requisite voltage and this portion of the apparatus covers voltage ranges of 100-125 and 200-250, on both direct and alternating supplies.

The lamp circuit has an output of 16 watts at 0·8 volts, enabling any medical lamp to be connected. For cautery, a current up to 25 amperes can be obtained, depending on the size of the leads, holder and cautery point.

The unit measures 9 by 7 by 6 inches and weighs 15 lbs. only, so that it is readily portable. The working parts are encased in ebonised mahogany, and the controls are mounted on a chromium plated panel, which gives an attractive finish to the apparatus. A surgeon can use the apparatus in any part of a hospital, and then take it in his car for use at a patient's residence.

The apparatus is manufactured by The Balding Electrical Company, Scientific Instrument Manufacturers, 33, Theobald's Road, Holborn, London, W.C. 1, from whom further particulars and prices can be obtained.

AUTOMOBILE AND ALLIED TRADES.

United Kingdom Car Successes.

An interesting development of the United Kingdom Motor Industry has been the convincing performances which United Kingdom cars have been putting up on the track and in endurance tests, both at home and overseas.

The future development of the compression ignition engine is a matter of engaging the careful attention of all connected with the production of cars and commercial vehicles, and consequently the recent success of Capt. G. E. T. Eyston at Brooklands is of particular significance from this aspect. In a downpour of rain and on a water-covered track, this driver made the first British attempt upon world records for a class in which America has hitherto enjoyed unchallenged supremacy when he attacked the Diesel car record of 100·75 m.p.h. set up at Daytona in February, 1931, by the American, Mr. C. L. Cummins. In this attempt Eyston was successful in raising the speed record to 104·86 m.p.h. for the kilometre and 102·13 m.p.h. for the mile, driving a comfortable saloon car capable of seating four people, powered with a six cylinder heavy oil 'bus engine.

With a United Kingdom light car specially developed for high-speed record attempts, new records for distances of from five to ten miles were recently set up at Montlhery Racing Track, the figures being: for the five miles 119·38 m.p.h.; ten kilometres 119·39 m.p.h.; and ten miles 119·19 m.p.h.

A United Kingdom light car has recently created a new record for the crossing of Canada by car, covering the journey from Halifax to Vancouver in the amazing time of five days, five hours, and forty minutes. The total distance covered was almost 4,250 miles, of which two-thirds was over very bad roads, yet the car maintained an average speed of 34 m.p.h. and used only 86 gallons of fuel and 3 quarts of oil for the entire trip.

The United Kingdom has held the world's standing-start records for the mile and kilometre for a number of years, the former since 1929 when Kaye Don with a 4-litre Sunbeam averaged 100·77 m.p.h. and the latter from 1926 when the late Parry-Thomas, with his Thomas Special, attained 86·90 m.p.h. Mr. John Cobb, with his special Napier-Railton car, at Brooklands recently made an attempt on both records and secured the mile standing-start record with 102·52 m.p.h. At that attempt he also beat the record put up by Parry-Thomas for he recorded 88·14 m.p.h. for the kilometre.

Almost simultaneously with this, however, a Swiss driver had, at Montlhery, reached 88·33 m.p.h. for the standing-start kilometre record, and on learning this Cobb later made a second attempt being successful in beating the Swiss record by 1-20th of a second, to 88·56 m.p.h. During this attempt Cobb put up the fastest speed ever recorded at Brooklands in covering a flying kilometre at the average speed of 143·67 m.p.h., thus beating the previous best speed of 140·95 m.p.h. over the same distance.

These instances could be amplified with accounts of successes achieved by United Kingdom cars and drivers in many parts of the world, but sufficient has been said to prove that in the workmanship, design, and construction the United Kingdom motor vehicle is unsurpassed. The lessons which have been learned in the past, through performances on the track and in pioneering and hazardous performances by United Kingdom vehicles in different parts of the world, have been the basis upon which the British motor vehicle has been evolved and when, to the engineering experience thus obtained is added the intimate knowledge of overseas requirements it is not surprising that the United Kingdom vehicle is finding increasing favour in all markets.

The past year has seen wonderful progress by the United Kingdom motor industry. At home and overseas United Kingdom vehicles are securing expanding business; on the Continent and in other markets where hitherto entrance was virtually closed to it, the product of the United Kingdom motor vehicle factory is enjoying increasing popularity. Coincident with this, United Kingdom vehicles, in the hands of United Kingdom drivers, have been proving to the world that United Kingdom engineering practice can produce vehicles that can give abundant evidence of their sturdiness and trustworthy abilities and to the success in the utility field is being added many tributes of wonderful performances on track and in trials.

This is as it should be, for surely the successful racing or record shattering car of to-day provides the basis of the utility vehicle of to-morrow.

Commercial Motor Exhibition.

The great strides which the commercial side of the motor industry has made were demonstrated at Olympia in London at the beginning of November when the commercial Motor Transport Exhibition was opened. The exhibition is held every two years, and this year's show gave striking evidence of the progress made, both from the point of view of technical and scientific improvements in design and execution, and also of the brighter trade outlook. There were assembled all the latest triumphs of efficiency which have been evolved recently by the leading United Kingdom firms, and the resultant sales were very satisfactory.

The designers of the commercial vehicles have achieved a greater power to weight ratio, and this is partially due to better chassis and coachwork. The manufacturers have adapted their products to meet all kinds of requirements, with the result that they are exporting commercial motor vehicles to all parts of the world including places where transport conditions are still in a primitive state. As for sales at the show, within an hour or two of the opening many of the larger firms were booking orders, not for single vehicles but for fleets!

A NEW DEVELOPMENT IN REFRIGERATED TRANSPORT.

The Dyson Insulated Containers.

The Dyson insulated container represents the latest development in the transport of perishable foodstuffs by road, rail, or sea. Moreover, it affords an admirable instance of co-operation between R. A. Dyson & Co., Ltd., and Imperial Chemical Industries in the solution of a problem of public importance. The advent of "Drikold," or solid carbon dioxide, now being manufactured by I.C.I. Ltd., has gone a long way towards the solution of the problem of the carriage of perishable foodstuffs, but not unnaturally considerable research and experiment has been necessary before the best results were obtained. The range of insulated containers now being designed by Messrs. Dyson & Co. embody the results of these experiments.

The Dyson " Drikold " Trailer.

The most popular of the range, for the transport of chilled or frozen meat, is an insulated trailer having internal dimensions 13 feet long by 6 feet 6 inches wide by 6 feet 10 inches high, giving a capacity of approximately 575 cubic feet. It has been designed for a load of 8-10 tons, and in certain models is fitted with rails running at intervals from side to side near the roof, from which meat may be hung. In models in which the load is to be stacked on the floor, the height of the body is lower by 9 inches. A 4-inch air-space on every side of the body, including the gas-tight doors, is fitted with layers of a patented insulation material known as " Alfol ", consisting of sheets of crinkled aluminium foil, and supplied by Messrs. Alfol Insulation Ltd., London. Special construction is necessary to provide this type of insulation, which supersedes the heavier and more easily fouled compressed sawdust or cork used in the majority of old-type vans. Its extreme lightness makes it ideally suitable for refrigerated vehicles of all types, in which low body-weight means a correspondingly low heat-capacity.

The refrigeration equipment consists of two bunkers, one at each end of the body, each capable of holding 100 lbs. of " Drikold ", and each fitted with a finned conductor plate which serves to abstract the heat from the atmosphere and to conduct it to the " Drikold ". The bunkers are designed by I.C.I. to suit any special conditions and size of container, depending mainly upon the class of goods to be carried, and the period during which they are to be retained in the van. Any load which is damp will naturally cause the deposition of hoar frost on the conducting plates, and provision is made for avoiding " messiness " by melting and leading off the water. A unique property which " Drikold " possesses as a refrigerant is the specific preserving power of the gas formed from its vaporization, recent research having shown that an atmosphere of carbon dioxide definitely inhibits the growth of bacteria and moulds on meat. So that full advantage may be taken of this valuable property, the doors of the Dyson-" Drikold " van are made completely gas-tight, since carbon dioxide gas is approximately twice as heavy as air at the temperature of the solid block, and thus tends to pour out of the smallest crack or opening. Arrangement is made for the gas given off by the "Drikold" to be pumped either into the refrigerated space of the body, or into the outside atmosphere, or into the insulation; the point of the last arrangement is to improve the efficiency of the insulation, dry carbon dioxide gas being a poorer conductor of heat than the air which would otherwise be present. The "Drikold" is loaded into the equipment through the roof, an arrangement which renders unnecessary the opening of the main doors of the trailer, should it be found necessary to "re-ice" at intervals during a very long journey.

Conductor plates of a special light type of galvanised sheeting line the interior of the body, and assist rapid cooling throughout. This method of construction ensures the use of the least possible quantity of "Drikold" consistent with efficient cooling throughout the van, thus greatly reducing the cost of operation, and increasing the period during which the container or van may be kept at an even temperature with one charge of "Drikold". In order to assist the free circulation of air round the contents of the body, a hard wood grill covers the floor, and channel strips are fixed vertically on all walls to keep the contents away from the floor and wall surfaces. The whole of the interior is constructed of galvanised steel sheet, a point which will be appreciated when diverse loads have to be carried; washing-out is facilitated after each load, so that there is no risk of contamination from one load to another.

Tests carried out on the transport of frozen meat in this trailer on journeys from Liverpool to Smithfield Market have proved entirely satisfactory.

The trailer described is but one of a whole range of "Drikold" refrigerated containers for all purposes, including detachable skips or sling vans for use when loads are required to be transported over road, rail or sea, as well as fitted bodies of any capacity for motor lorries and trailers. The sole sales and distribution of the Dyson-"Drikold" refrigerated containers, both at home and abroad, are controlled by the Frigid Transport Equipment Company, Abbey House, Baker Street, London, N.W. 1. Deliveries of "Drikold" can now be made anywhere with ease.

It is encouraging to know that, as a result of unremitting research during the last few years, the United Kingdom is no longer behind America in the technique and application of carbon dioxide refrigeration. The I.C.I. is pre-eminently well situated for giving advice to those contractors who are keen to maintain the efficiency of their services, and are prepared to give this new system of "Drikold"-refrigerated transport fair consideration and trial.

Advantages of "Drikold".

Unlike such refrigerants as methyl or ethyl chloride, sulphur dioxide or ammonia solutions, "Drikold" requires no expenditure of energy for its application. It does not melt to form a liquid, but changes directly into the harmless gas from which it is made, so that the mess and corrosion troubles associated with water-ice or ice-salt mixtures are entirely obviated. It is manufactured under conditions of the utmost cleanliness, so that there is no risk of contamination of the produce carried. It gives approximately three times the cooling performance of water-ice, and occupies minimum space for all jobs of refrigeration, thus interfering to the least possible extent with the pay-load.

SHIPBUILDING.

The upward trend in the United Kingdom shipbuilding industry, which has shown itself during 1933, is perhaps the most gratifying of all recent signs of recovery, for no other United Kingdom key industry has suffered more severely from the world depression. So serious was the position at one period that the shipbuilding yards were working less than one-tenth of capacity, while 63 per cent. of their workers were unemployed.

In some measure this position was due to the policy of rigid rationalisation on which the leaders of the industry had embarked, and which led to the closing down of redundant yards. Whatever hardship this policy brought in its train, it was an inevitable step under the prevailing circumstances. It is estimated that the present entire world trade can be carried by about 40 million tons of shipping, whereas 57 million tons are actually available. In spite of scrapping, the world's tonnage is nearly 50 per cent. greater than it was in 1914, while the volume of trade now is smaller than it was then.

The position is being carefully followed by the United Kingdom Chamber of Shipping and by a committee representing the owners of United Kingdom merchant vessels. Whatever means for further improvement may be adopted, there is, however, little doubt that United Kingdom shipbuilding has left the worst of the depression behind and is now steadily following an upward curve. This fact is borne out by the returns of shipbuilding for the quarter ended September 30th, recently issued by Lloyds Register of Shipping, which reveal that on that date 303,762 tons of merchant ships were under construction in the United Kingdom of Great Britain and Ireland, as compared with 238,433 tons a year ago.

For the first time in 3½ years the tonnage under construction throughout the world shows an increase, being now 756,752 tons or 24,257 tons greater than at the end of June. Of this world total 40·1 per cent. is being built in the United Kingdom. The present United Kingdom tonnage under construction is more than three times that of her nearest rival. Especially encouraging is the fact that the amount of laid-up tonnage in the United Kingdom is steadily decreasing. Since the beginning of 1933 27·2 per cent. of the laid-up vessels have again been taken into use.

TEXTILES.

COTTON.

Cotton prices have not yet benefited to any extent by the fall in the value of the dollar. Commenting on this in their cotton letter, Reiss Brothers state that, although there are many obstacles to the revival of international trade, close observation of developments shows that in most countries trade and industry are on the upgrade; cotton is benefiting by this trend, as is shown by the exports from the United States and by world spinners' takings, which are both considerably larger than they were a year ago. If this improvement is maintained, the carry-over will again be reduced, and if the probability of a further acreage reduction next season is taken into account the way should be open for the establishment of a higher level of values. Reiss Brothers conclude by saying that the requirements of cotton goods throughout the world are very great and urgent and that, given a return of confidence and even a partial lifting of trade restrictions, consumption might increase beyond all present expectations.

Efforts are still being made to control production and prices of Egyptian and finer counts of American yarns by the appropriate Associations and this may be a contributory factor in the hardening of yarn price which has occurred recently.

Offers for piece-goods on the Manchester Exchange have not advanced to cover these higher prices for yarns. There has, however, been a fair volume of enquiries from South America and some orders placed for dyed fancies; drills and white shirtings have been bought for South Africa. Offers from India, China and the Straits Settlements have been few and only oddments are required for the Near East, Morocco and West Africa.

Rather more grey cotton piece-goods were exported during the first ten months of 1933 than during the corresponding period of 1932, but there were small declines in white and printed piece-goods and also yarn dyed and piece dyed tissues. The export of all cotton piece-goods amounted to 1,705,172,600 sq. yards (January-October, 1933) against 1,843,002,200 (January-October, 1932).

WOOL.

The great expansion of foreign demand for English wool is one of the remarkable features of the trade this year.

Exports during the first ten months of 1933 amounted to no less than 57,280,100 lbs. compared with 30,537,200 lbs. in the corresponding period of last year.

Increased quantities were exported to Germany, Belgium, France, Italy and Canada, but the most striking increase occurred in the case of the United States, where the exports rose from 2,249,800 lbs. to 14,807,000 lbs.

The exports of semi-manufactures and wool tissues during the ten months ended October 31st last compared with the corresponding period of 1932 were as follows:—

	Jan.-Oct., 1933.	Jan.-Oct., 1932.
Wool tops (centals of 100 lbs.) .	383,140	330,239
Woollen and worsted yarns (lbs.) .	35,786,800	31,412,100
Woollen and worsted tissues (sq. yds.)	78,554,400	68,884,800

An improvement in overseas trade is reported from one or two markets, particularly Canada, Brazil, Holland, Denmark and Sweden.

LINEN.

Regular markets for local flax are now in operation, and the Ministry of Agriculture Market Returns give the price as 9*s*. per stone as compared with 8*s*. per stone for the corresponding markets of 1932.

Exports of yarns during October, 1933, reached the high figure of £79,034 as compared with £32,884 in October, 1932, and £42,375 in October, 1931, and with £58,500 for the average of the previous nine months of 1933.

Exports of piece-goods during October continued the marked upward tendency of recent months. The figures are: July £269,330, August £296,620, September £341,868, and October £373,076. The latter figure compares favourably with the values in October, 1932 and 1931, which were respectively £222,185 and £267,742.

Exports of piece-goods to the United States of America reached another high total at the figure of £156,589 as compared with September's figure of £143,103 and with £89,301 and £117,278 for October, 1932 and 1931, respectively. Brazil, Australia and China maintain their position as important markets, whilst Empire countries continue generally to show the greatest advance.

Exports of damask table linen for the month are high at £75,097, comparing with £63,596 in October, 1932, and £75.866 in October, 1931.

Imports of linen goods into the United Kingdom during October, 1933, were valued at £23,812 as compared with £41,440 and £93,430 in October, 1932 and 1931, respectively.

The total values of exports of linen goods from the United Kingdom during October, 1933, 1932 and 1931, were respectively £607,457, £434,984 and £510,929.

Total exports of linen goods from the United Kingdom during the ten months ended 31st October, 1931, 1932, and 1933, were respectively £4,425,386, £4,274,576 and £4,767,022.

The quantities of linen piece-goods exported during the same periods were 52,867,900, 53,720,400, and 65,576,800 square yards.

POTTERY AND GLASSWARE.

The upward trend in trade in the Pottery Industry noted in recent issues of the "Commercial Bulletin" has continued and conditions, at the moment, are better than they have been for a considerable period.

Information recently published in regard to unemployment in the industry in the "Potteries" area (on the basis of 62,000 pottery workers employed in the area) indicated that on 2nd October, 1933, 5,169 were totally unemployed and 5,777 temporarily stopped, a total of 10,946 or 17·65 per cent. Comparative figures quoted were:—

		Per cent.
June, 1933	16,318	26·32
March, 1933	17,870	28·82
December, 1932	18,772	30·27
September, 1932	15,651	25·24
October, 1931	19,206	30·97
October, 1930	13,160	21·22
October, 1929	3,866	9·46

Preliminary figures issued for the week ended 23rd October, 1933, show that the percentage of unemployment had further decreased from 17·65 per cent. to 14 per cent.

For the month of October, 1933, the value of the exports of pottery show an increase of £15,953 compared with the corresponding month of 1932. This is now the third consecutive month of 1933 to show an increase compared with the preceding year.

Following are details of the total quantity and value of the exports of pottery of all classes (excluding bricks) for the first ten months of 1933, with comparative figures for the two preceding years:—

	Quantity. cwts.	Value. £
January-October, 1933 . . .	2,068,067	2,342,974
January-October, 1932 . . .	2,084,053	2,462,476
January-October, 1931 . . .	3,233,022	2,910,887

The following statement gives details for each section of the industry:—

Section.	Value of Exports 1933.	Value of Exports 1932.	Decrease.	Percentage of decrease 1933 compared with 1932.
	£	£	£	
Tiles (all classes)	162,133	167,584	5,451	3·2
Sanitary ware .	488,069	474,313	13,756 (Inc.)	2·9 (Inc.)
Chinaware . .	177,009	190,312	13,303	7·0
Electrical porcelain . .	50,049	84,564	34,515	40·8
General earthenware . .	1,198,422	1,235,012	36,590	2·9
Stoneware . .	20,486	27,180	6,694	24·6
Refractory goods and clay products not elsewhere specified	246,806	283,511	36,705	12·9
Total . .	2,342,974	2,462,476	119,502	4·9

Following are figures of the value of exports of glass and glassware during the first ten months of 1933, with comparative figures for the two preceding years:—

	£
January-October, 1933	1,026,402
January-October, 1932	1,057,432
January-October, 1931	1,150,691

PAPER.

Conditions in the paper industry continue to show a steady improvement. Many mills find themselves unable to guarantee early deliveries, which is an indication of well-filled order books. The increased output resulting from the additional plant which has been installed during the past year is being readily absorbed and, whilst the demands of the home market are taking the bulk of the production, the amount disposed of for export account is increasing. Shipments during October were better than in the same month of 1932 and 1931.

The figures relating to the exports of paper and paper stationery for the month of October for each of the years 1931, 1932 and 1933 are as follows:—

	Cwts.	£
1933	367,113	620,341
1932	315,881	560,555
1931	289,991	551,574

The quantity exported during the first ten months of 1933 falls short of that exported during the corresponding period of 1932, but is higher than in 1931. The figures for the ten months' period are as follows:—

	Cwts.	£
1933	3,123,082	5,061,369
1932	3,224,870	5,396,745
1931	2,678,185	5,211,103

It is announced that Edward Lloyd Limited, who are very large producers of newsprint, have ordered from Walmsley (Bury) Limited, a new machine for their Kemsley Mill, which it is believed will be the largest in the world. The machine will be capable of an output of 1,000 tons per week.

Mono Containers Limited, of Feltham, Middlesex, have recently introduced a new cardboard milk container which they claim ensures absolute cleanliness. The container is filled from the bottom and has a perforated waxed paper section at the top. When required for use the wax paper section is torn open and the entire top section can be removed, disclosing a clean rim, which has not been soiled by handling. These new containers are to be marketed under the name " milpacks ".

AVIATION.

SLEEVE-VALVED AND H-SHAPED AERO ENGINES.

Essential to the development of more efficient flying machines is the production of new types of power plant which are more enduring, less costly to run and capable of delivering more power for each unit of fuel consumed than their predecessors. Aircraft design is fundamentally affected by the kinds of engine which are available; much of the notable performance achieved by the present-day aeroplane must be credited to the years of patient research and experiment that have produced the modern highly efficient aero engine.

Design and construction of a successful new type of aero engine is a long and costly process. Years of development work go to the production of a United Kingdom engine. Only those manufacturing firms that employ the best brains and the most up-to-date equipment can attempt with any certainty of reward the long and uphill task of nursing a new motor through its preliminary stages up to the point where it is trustworthy, fitted for hundreds of hours of flying without overhaul or undue attention, and ready to be put into quantity production for the satisfaction of buyers all over the world.

United Kingdom aero engines have earned an enviable reputation for efficiency and dependability. They are used in far more countries abroad than those of any other nation. United Kingdom built or designed engines provide, for example, the bulk of the horsepower in European air transport 'planes. They are used in the air forces of some thirty nations. One United Kingdom firm alone has sold licences permitting the manufacture of its engines in no fewer than sixteen countries. This supreme position in the world's markets is the reward of skill in design that may not unfairly be styled genius, to exceptionally high standards of workmanship, and to constant effort to improve. Consequently, the output of new types of aero motor from United Kingdom factories never slackens. As the need for improved engines becomes apparent, so the designers and the research workers get busy to solve the new problems involved.

Evidence of the care and long years of experiment which go to the production of a new United Kingdom aero engine is provided in facts which may now be revealed about the Bristol " Perseus " air-cooled radial engine, which is the first successful sleeve-valve aero engine to be built in the world. Eight years of development have gone to its construction. Working with the active support of the Air Ministry, the company's experimental engineers have made hundreds of tests.

Preliminary trials were conducted on a single-cylinder unit, which was run for several thousands of hours on the test bench. Not till 1932—seven years after the work was begun—was a complete engine constructed. That, in its turn, ran for hundreds of hours on test, followed, in July this year, by the official 100 hours " type test " and two periods of fifty hours' running on weak mixture and at high power respectively.

Incidentally, the " Perseus " is the first engine to go through the type test at the Bristol company's factory without any adjustment or " servicing." Not even removal of sparking plugs for adjustment was necessary.

The original engine is now engaged in flight trials; up to the present the results have been as satisfactory as those obtained on the test bench. Other sleeve-valved motors are now being built.

In cylindrical capacity the "Perseus" measures approximately 25 litres, which is about the same as the capacity of the "Pegasus" poppet-valve engines produced by the same company. It has actually given a higher power output than has yet been recorded by any air-cooled overhead poppet-valve engine of similar type, and that with lesser consumption of fuel and oil. A further important advantage is the reduction in the number of cylinder components, which is in the sleeve-valved "Perseus" approximately one-tenth of the number required in the poppet-valve cylinder, with its valve springs and numerous nuts and bolts. Much is expected from this new development in aero engine construction.

Another engine of revolutionary design may now be described in greater detail than has been possible up to the present. Several years ago Major Halford, a leading designer of automobile and aero engines, evolved the plans of an air-cooled motor which was primarily intended to overcome one of the chief disadvantages of the high-powered radial air-cooled unit—its large frontal area and consequent big resistance to movement through the air. His engine consisted in four banks of four cylinders, making sixteen cylinders in all, arranged like the uprights of the capital letter "H." Two banks of cylinders were vertical and two inverted. The result is an extremely compact power plant of small frontal area and low "drag," or air resistance.

Development of the engine was taken up by the Napier company, by whom it was named the "Rapier." The latest version of the engine about which details are publicly available is called the "Rapier" Series IV, and develops up to 385 horsepower at maximum speed. Its normal rating is 325/340 h.p. On the average power given at maximum speed it weighs 1·89 pounds per horsepower, the nett dry weight being 726 pounds. Its length overall is 55¼ inches, its height is 35¼ inches, and its width—which is the most interesting of the dimensional figures—is only 21 inches. The diameter of a radial motor of equivalent power is about 46 inches.

Interest also attaches to the high crankshaft speed of the engine. The average aero engine runs normally at around 2,000 revolutions a minute. The "Rapier" runs normally at 3,500 r.p.m., with a maximum speed of 3,900 r.p.m. The figures indicate a much closer approximation to current automobile practice than has hitherto been reached in the aeroplane engine.

The "H" design in aero engines holds considerable promise. Because of its dimensions, shape and weight an engine of this kind producing, say, 700 h.p. might endow an aeroplane with performance equal to that given by a 1,000 h.p. unit of more orthodox construction. An obvious point is that an engine of such small overall dimensions might be entirely stowed away within the wings of an aeroplane, reducing engine "drag" to nothing.

Both of these engines are likely to play an important part in the future development of the flying machine. It is significant that each is unique; no other country has yet produced a successful sleeve-valved or "H" motor. Plainly, the United Kingdom aero engine makers will not easily be deprived of their long lead over all their rivals.

CATALOGUE LIBRARY.

The undermentioned catalogues relating to United Kingdom manufacturers have recently been received and may be consulted by *bonâ fide* firms or individuals at the Office of His Majesty's Senior Trade Commissioner in India, Fairlie House, Fairlie Place, Calcutta.

Names and Addresses.	*Description.*
Tractors (London), Ltd., Broad Lane, London, N. 15.	Tractors.
* The Briton Brush Co., Ltd., Wymondham, Norfolk.	History of the Briton Brush Co., Ltd.

* The catalogue marked with an asterisk has also been received in the Office of His Majesty's Trade Commissioner, 3, Wittet Road, Ballard Estate, Bombay, where it may also be consulted by *bonâ fide* firms or individuals.

In addition, His Majesty's Trade Commissioner, Bombay, has recently received the undermentioned catalogue:—

Name and Address.	*Description.*
Gunn and Moore, Ltd., Nottingham.	Sports Requisites.

TRADE ENQUIRIES.

The names of the United Kingdom firms referred to in the enquiries mentioned below will be furnished to reputable firms on application to His Majesty's Senior Trade Commissioner, Post Box No. 683, Fairlie House, Fairlie Place, Calcutta.

No. 598-33.

A United Kingdom manufacturer of cotton textiles including Tickings, Poplins, etc., is desirous of appointing an agent in Calcutta.

No. 871-33.

A well-known and important United Kingdom firm of belting manufacturers are desirous of appointing agents in Calcutta. In addition to their beltings, the firm also manufacture footwear leathers, and golf requisites.

No. 934-33.

A United Kingdom firm manufacturing steel pens and lead pencils wish to appoint a European House with Buying Agents in the United Kingdom to act as their representatives on a commission basis.

No. 998-33.

The United Kingdom patentees of a method of rust proofing are desirous of appointing an agent in Calcutta to exploit this process.

No. 1027-33.

The United Kingdom holders of the Indian rights for a patent slotted shelf suitable for window displays are desirous of getting into touch with a local firm prepared to purchase the rights for India or to manufacture on a royalty basis.

No. 1065-33.

A United Kingdom manufacturer of a patent machine for tapping water and gas mains and inserting ferrules wishes to get into touch with a suitable agent to undertake his representation.

No. 1079-33.

Old established United Kingdom manufacturers of leather belting and textile belting of all kinds, picking bands, etc., wish to appoint agents in Calcutta for the sale of their manufactures.

No. 1089-33.

A United Kingdom firm manufacturing Number Plates for motor cars wishes to get into touch with a suitable local concern handling motor accessories who would be prepared to undertake its representation.

MGIPC—L—395HMTC—15-1-34—1,050.

H. M. TRADE COMMISSIONERS IN INDIA.

Calcutta—

Sir Thomas M. Ainscough, C.B.E.,
His Majesty's Senior Trade Commissioner in India and Ceylon.

Mr. R. B. Willmot,
His Majesty's Trade Commissioner at Calcutta.
Post Box No. 683, Fairlie House, Fairlie Place.
Telegraphic Address.—" Tradcom, Calcutta."
Telephone No.—" Calcutta 1042."

Bombay—

Mr. W. D. M. Clarke,
His Majesty's Trade Commissioner at Bombay.
Post Box No. 815, 3, Wittet Road, Ballard Estate.
Telegraphic Address.—" Tradcom, Bombay."
Telephone No.—" Bombay 23025."

Ceylon—

Imperial Trade Correspondent,
The Principal Collector of Customs, Colombo.